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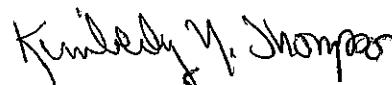
CORRECTIVE ACTION PLAN
Chevron Service Station #9-1312
2500 El Camino Real
Carlsbad, California
Project No. 08CH.51312.04
September 16, 2004

Prepared For
Chevron Environmental Management Company
145 S. State Boulevard
Brea, CA 92822-2292


Submitted By
SECOR International Incorporated

Prepared by:


Kelsi S. Nelson
Staff Engineer


Kimberly N. Thompson
Project Manager

Approved by:


Neal S. Keller, P.E. #C59525
Senior Engineer





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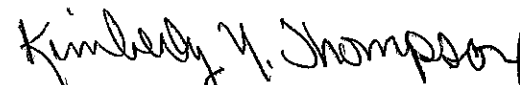
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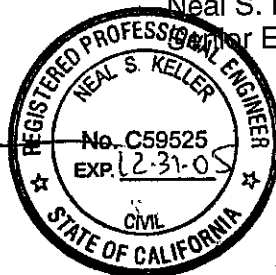


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1.0 INTRODUCTION

SECOR International Incorporated (SECOR), on behalf of Chevron Environmental Management Company (Chevron), has prepared the following Corrective Action Plan (CAP) for Chevron Service Station #9-1312, located at 2500 El Camino Real in Carlsbad, California (Figure 1), for submittal to the San Diego County Department of Environmental Health, Site Assessment and Mitigation Program (SAM). This CAP provides a summary of assessment work conducted at the site; and an evaluation of, and recommendations for, remediation of hydrocarbon-impacted soil and groundwater at the site.

Based on an evaluation of suitable remedial technologies for the site, SECOR recommends remediation by natural attenuation (RNA) to remediate source area soil and groundwater impacts. This CAP has been prepared in accordance with the requirements of *California Code of Regulations Title 23, Division 3, Chapter 16, Article 11*. Section headings generally correspond to the numbered items in the Site Corrective Action Plan Checklist in the *SAM Manual 2004* (SAM, 2004).

2.0 SITE BACKGROUND

2.1 SITE IDENTIFICATION

Site Address: Chevron Service Station #9-1312
2500 El Camino Real
Carlsbad, California

Current Site Use: Retail Gasoline Station/Mini-Mart

Assessor's Parcel No: 167-03-32

Property Owner: ChevronTexaco Corporation
145 South State College Boulevard
P.O. Box 512485
Los Angeles, CA 90051

Responsible Party: Chevron Environmental Management Company
P.O. Box 2292
Brea, CA 92822-2292

Consultant: SECOR International Incorporated
2655 Camino Del Rio North, Suite 302
San Diego, CA 92108-1633

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SAM Case #: H05724

2.2 SITE DESCRIPTION

Chevron Service Station #9-1312 is an active automotive service station located adjacent to El Camino Real near Buena Vista Creek in Carlsbad, California (Figure 1). Structures on the site include the service station building, three dispenser islands, and an overhead canopy above the dispenser islands (Figure 2). Motor fuel dispensing facilities include four motor fuel underground storage tank (UST) systems (for storage of three grades of gasoline products and one grade of diesel fuel), underground product delivery piping, vapor recovery piping, and fuel dispensers at the dispenser islands. The site is paved with both asphaltic concrete and concrete. The surface of the site slopes to the west and north, away from the station building. The approximate elevation of the site is 29 feet above mean sea level (MSL).

The site is bounded by Buena Vista Creek (north of Haymar Drive) to the north, and by retail stores and parking areas to the east, south, and west. Surrounding land use (within a 1.0-mile radius) includes one public school (Carlsbad High School), which is situated to the south of the site. The predominant land uses are commercial and residential. The service station is located

at the northwest corner of the Carlsbad Plaza Shopping Center. Plaza Camino Real, which is another shopping center, is situated to the west of the site across El Camino Real.

2.3 SITE USAGE

The site has been occupied by a gasoline service station since at least 1981. The site currently operates as a Chevron gasoline service station and mini-mart, and SECOR understands that the site will continue to be operated as a retail gasoline station in the foreseeable future. Currently, the site contains four double-walled, fiberglass USTs and double-walled product piping.

2.4 GEOLOGIC SETTING

The site is located within the southwestern portion of the Peninsular Range Province of California. The site lies on the southeastern edge of the Buena Vista Lagoon, one of several drainages that cut marine terrace deposits. The site may have been constructed on part of the modern lagoonal sediments of the Buena Vista Lagoon. Concentrated along the drainage are older Quaternary-age alluvium (nonmarine terraces), recent Quaternary-age alluvium, and Quaternary-age slope wash and beach deposits. In general, these deposits consist of mixtures of poorly consolidated silty sand, gravel, cobbles, and boulders. The main exposed geologic unit in the surrounding hills is the Del Mar Formation, a Pliocene/Pleistocene clayey-silty sand (Harding Lawson Associates, or HLA, 1993).

Site lithologies are variable beneath the site. There appear to be two distinct sand-rich units: an upper sand and a lower sand, separated by a finer-grained silt/clay unit. As depicted on the geologic cross sections (Figures 3, 4 and 5), the upper sand unit and the lower sand unit are located at depths of approximately 5 to 15 feet below ground surface (bgs) and approximately 20 to 25 feet bgs, respectively. The upper and lower sands generally are separated by a two- to eight-foot thick layer of silts and clays. Clays or silts underlie the lower sand to the total depth explored, approximately 30 feet bgs (HLA, 1993).

2.5 HYDROGEOLOGY

The site is located within the El Salto Hydrologic Subarea (HSA 4.21) of the Buena Vista Creek Hydrologic Area (HA) of the Carlsbad Hydrologic Unit (HU). Existing beneficial uses for surface water within El Salto HSA are Agricultural Supply (AGR), Industrial Service Supply (IND), Contact Water Recreation (REC-1), Non-contact Water Recreation (REC-2), Warm Freshwater Habitat (WARM), Wildlife Habitat (WILD), and Rare, Threatened, or Endangered Species (RARE) as classified by the California Regional Water Quality Control Board, San Diego Region (RWQCB, 1994). Surface water within El Salto HSA is exempted from Municipal and Domestic Supply (MUN) beneficial uses. Groundwater within El Salto HSA has designated beneficial uses for MUN and AGR and has a potential beneficial use for IND. Beneficial uses are identified and listed in Table 1.

The San Diego County Department of Land Use states that the groundwater east of El Camino Real (Buena Vista Creek) is of marginal water quality and can be used for irrigation (HLA, 1987b).

Based on a review of a map prepared by the San Diego County Water Quality Authority (SDCWA), the site is not located within a sensitive aquifer boundary (SDCWA, 1996). Buena Vista Creek, located approximately 150 feet north of the site, is a drainage channel that flows to

the west. The portion of the channel directly north and west of the site is concrete lined; the remainder of the channel (upstream) is unlined. It appears that Buena Vista Creek directly influences the groundwater flow direction and gradient in the site vicinity. Groundwater flows toward Buena Vista Creek at a gradient of 0.031 vertical feet per horizontal foot (ft/ft) (Figure 6). Buena Vista Creek runs seasonally and discharges into Buena Vista Lagoon which supports abundant reeds and riparian habitat. Buena Vista Lagoon's waters are normal marine, brackish and vary seasonally.

A 66-inch-diameter reinforced concrete storm drain runs northwest along the western edge of the service station and a 27-inch diameter reinforced concrete storm drain runs southwest along the northern edge of the site. Both storm drains connect on the northwest corner of the site with a 72-inch-diameter reinforced concrete storm drain which passes diagonally (northwest) through the intersection of El Camino Real and Haymar Drive (Figure 2) and terminates in Buena Vista Creek. Based on previous site assessment data, the storm drain appears to be partially submerged beneath the water table.

According to the current Chevron Quarterly Groundwater Report, for the Second Quarter 2004, depth to static water in site wells is approximately 8 feet bgs with a range of 3 to 19 feet bgs; and groundwater flows to the northwest with a gradient of 0.031 ft/ft (Appendix A).

2.6 PREVIOUS ENVIRONMENTAL ACTIVITIES

2.6.1 Site Assessment Activities

Chevron initially occupied the site in 1981. Hydrocarbons were first discovered during an excavation to replace a hydraulic lift in the service bay at the site in February 1987. Between 1981 and 1992, six soil borings and 21 well borings were drilled and sampled at the site to evaluate the extent of the motor fuel hydrocarbon impacts to subsurface soil and groundwater. The well borings were completed as shallow groundwater monitoring wells (MWs). Only one monitoring well has been abandoned (well MW-5), because it had an improper seal-slotted casing extending close to the ground surface. See Appendix B for borehole and well logs.

In 1981, shallow MWs were installed by Chevron in the vicinity of the USTs during UST installation. At that time, five USTs of varying capacities (four containing motor fuel products and one containing used oil) were installed on-site. A release of motor fuel products was detected in February 1987 (Release #1) when petroleum hydrocarbons were observed at the bottom of an excavation pit during the replacement of a hydraulic lift located inside the service station building (HLA, 1993). HLA installed four MWs (B-1 through B-4) during the initial site assessment (HLA, 1987a). In July 1987, two additional MWs were installed (B-5 and B-6) (HLA, 1987b). The existing MWs were incorporated in a formal quarterly groundwater monitoring program in December 1988. HLA advanced one soil boring (B-7) and one well boring (MW-5) in early April 1989 (HLA, 1993).

In mid-September 1990, Hallmark Petroleum Company (Hallmark) removed the fiberglass product piping connecting the USTs and the dispenser islands. The product piping was decontaminated prior to removal and properly disposed of by Hallmark. The product piping upgrade project was supervised by Groundwater Technology Inc. (GTI), as reported in Product Line Removal, GTI 1990. GTI noted that both visual observation and field evidence indicated that hydrocarbon-impacted soil was present at depths up to 5.5 feet beneath the product piping. In accordance with guidelines of the County Hazardous Materials Management Division (HMMD), soil testing was performed, at the native soil interface and along the piping traces on

20-foot centers. Elevated concentrations of total petroleum hydrocarbons as gasoline-range organics (TPHg) and TPH as diesel-range organics (TPHd) were found in some of the samples. The highest TPHg concentration was 2,900 milligrams per kilogram (mg/kg) at sample location PL-2 (Figure 7). Similarly, the highest TPHd concentration (13,000 mg/kg) was found at sample location PL-8. Diesel fuel was observed floating on concrete cutting water within the east-west product line trench. The diesel light non-aqueous phase liquids (LNAPL) were reported by the HMMMD representative to be Release #2 for the site. Steel product lines were encountered during the removal of the fiberglass pipes, and some of these lines were removed in mid-September 1990 (HLA, 1993). Excavated soil from the piping trace trenches was used to backfill the trenches, and the excess (approximately 30 bulk cubic yards) was used as tank pit backfill following repair of the pump turbines (GTI, 1990).

In June 1991, HLA drilled and sampled seven soil borings (B-8 through B-12) and two well borings (MW-6 and MW-7) to further assess the extent of the previously-identified hydrocarbon-impacted soil and groundwater (HLA, 1993). Well borings MW-6 and MW-7 were completed as shallow groundwater MWs. In August 1991, as part of the same investigation, two off-site wells (MW-8 and MW-9) were installed to assess groundwater quality downgradient from the site. In early October 1991, HLA drilled and sampled five soil borings (B-8A through B-12A) and two well borings (MW-6A and MW-7A) to collect soil samples for diesel analysis (modified EPA Method 8015 as TPHd). Soil samples had detectable levels of TPHg and BTEX but non-detectable levels of TPHd (Table 2).

Though TPHd was detectable in soil samples, TPHd was present in only two groundwater samples in wells MW-8 at 510 ppb and B-7 at 270 ppb on August 26, 1991. All other groundwater samples analyzed from November 26, 1991 to December 10, 1992 were non-detectable for dissolved TPHd concentrations. Therefore, TPHd is not considered a constituent of concern (COC) that will drive remediation for this site. Refer to Table 3 for detailed groundwater data.

In June 1992, cone penetration test (CPT) and Hydropunch groundwater sampling were performed to assess the extent of the dissolved motor fuel plume(s). In August 1992, HLA drilled and sampled three soil borings (B-13 through B-15) and five well borings (MW-10 through MW-12, MW-14, and MW-15) to assess the lateral extent of hydrocarbon-impacted soil and the dissolved phase hydrocarbon plume in groundwater. HLA selected its soil boring and well boring locations based on the Hydropunch screening results. In 1993, HLA concluded that the three-dimensional extent of the hydrocarbon impacts to soil and groundwater have been delineated satisfactorily (HLA, 1993).

In late June 1997, DST Builder (DST) removed the dispensers and dispenser islands, exposed and removed the 1,000-gallon capacity used oil UST, and removed portions of the product piping to allow installation of containment units for the product dispensers. Soil generated from the used oil UST excavation was segregated from soil generated from the product piping excavation and stockpiled on site. During excavation activities, personnel from Alton Geoscience (Alton) monitored for the presence of volatile organic compounds (VOCs) emanating from the excavations and stockpiles. According to Alton (1997), no VOC emissions were detected in the ambient air at the perimeter of the site during excavation activities (Alton, 1997).

In January 1998, during a routine product piping inspection, a blockage was detected in one of the previously modified product lines. The faulty product line was repaired successfully and the soil generated during hand excavation was removed. According to Alton (1998), confirmatory

soil samples collected in the UST and product line work areas indicated TPHg constituent concentrations below laboratory detection limits.

2.6.2 Site Remediation Activities

In mid-April 2001, SECOR initiated the first of nine planned monthly 24-hour remediation events utilizing the mobile remediation system (MRS) for high-vacuum dual-phase extraction (HVDPE) (SECOR, 2002).

The MRS provides for simultaneous removal of hydrocarbon mass from the vadose zone, capillary fringe, and saturated zones. This is accomplished by applying high vacuum to the wellhead while using a stinger within the well casing to extract groundwater. The stinger is used to draw down the water table, thereby exposing a greater thickness of the hydrocarbon-impacted "smear zone" (including portions of the upper saturated zone that had been below the water table) to intensive vapor extraction. Hydrocarbon concentrations in the soil decrease with groundwater draw down below the groundwater table, or the "lower smear zone." In general, influent concentrations are highest during initial extraction from a well, and decrease over the course of the extraction. For the most part, benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl-tert-butyl-ether (MTBE) concentrations followed similar concentration patterns to volatile fuel hydrocarbons (VFH), with the highest concentrations occurring in the initial sample.

During each 24-hour MRS remedial event, the MRS was connected to groundwater monitoring wells MW-6 and either MW-2 or MW-3 for HVDPE. Hydrocarbon mass was removed in the vapor and aqueous phases. Influent soil vapor air results from MRS events show VFH ranging from 900 to 3,700 parts per million by volume (ppmv), benzene ranging from <20 to 9.3 ppmv, toluene ranging from <40 to 130 ppmv, ethylbenzene ranging from <40 to 200 ppmv, xylenes ranging from <40 to 220 ppmv, and MTBE ranging from <5.0 to 72 ppmv. Approximately 527 lbs of hydrocarbon mass were removed in the vapor phase during the MRS events. The cumulative duration of MRS remediation was 218 hours (SECOR, 2002).

Approximately 32,364 gallons of impacted water were removed from the site during MRS events completed between May 2001 and January 2002. The average TPHg concentration was 1,700 micrograms per liter ($\mu\text{g/L}$), or 1.7 milligrams per liter (mg/L). All waste fluids generated during the MRS events were collected in a Baker tank on-site and then transported off-site, under bills of lading, by Ecology Control Industries (ECI) for proper disposal (SECOR, 2002).

3.0 ASSESSMENT OF IMPACTS

The purpose of this section is to (1) identify the contaminants of concern (COCs) present at the site; (2) discuss the chemical, physical, toxicological and environmental fate/transport characteristics of the COCs; and (3) describe the extent of COC impact (and potential impact) to soil, groundwater, surface water, air and subsurface utilities at and near the site.

3.1 CONTAMINANTS OF CONCERN

Available information regarding past and present UST operations at the site indicate the USTs were (and are) used for storing gasoline. Accordingly, gasoline-related hydrocarbons and additives have been identified in soil and groundwater samples collected from the subsurface and per the results of laboratory analytical testing methods during. Hydrocarbon compounds identified in the subsurface include total petroleum as gasoline (TPHg), benzene, toluene, ethylbenzene, xylenes (BTEX), Methyl tert-butyl ether (MTBE) and tert-butanol (TBA).

3.2 CONTAMINANT CHARACTERISTICS

Chemical, physical, environmental fate/transport characteristics and relevant regulatory levels of the COCs are summarized in Table 4.

3.2.1 Gasoline

Gasoline is a clear liquid with a characteristic odor that is used as a fuel for internal combustion engines and as a solvent. Gasoline is a flammable liquid and is insoluble in water. Gasoline vapors are also flammable and may flash if an ignition source is present. Gasoline contains chemicals which are hazardous to human health and may cause cancer (New Jersey Dept. of Health). The primary chemicals of concern in gasoline that have been reported in samples from the site will be discussed individually in the following paragraphs.

3.2.2 Benzene

Benzene is a colorless liquid with an aromatic odor. It is found in gasoline, is used in making other chemicals and as a solvent. Commercial use of benzene as a solvent is generally being phased out due to its toxicity. Benzene is flammable in liquid and vapor states and vapors may flash if an ignition source is present. Benzene is a carcinogen and mutagen which is readily absorbed through inhalation, ingestion and dermal pathways (New Jersey Dept. of Health).

3.2.3 Toluene

Toluene is a colorless liquid with a sweet, strong odor. It is present in gasoline and used in making other chemicals, perfumes, dyes and detergents. Toluene is flammable in liquid and vapor states and vapors may flash if an ignition source is present. Toluene may be a teratogen and exposure may damage a developing fetus (New Jersey Dept. of Health).

3.2.4 Ethylbenzene

Ethylbenzene is a colorless liquid with an aromatic odor that is found in gasoline, used in the production of polymers and as a solvent. Ethylbenzene is flammable in liquid and vapor states, and vapors may flash if an ignition source is present. Long term exposure to ethylbenzene may

cause damage to the liver. There is limited evidence that exposure to ethylbenzene may cause cancer or damage to a developing fetus (New Jersey Dept. of Health).

3.2.5 Xylenes

Xylene isomers (meta-xylene, ortho-xylene and para-xylene) are clear liquids with strong odors. Xylenes are found in gasoline and used as solvents. Xylenes are flammable in liquid and vapor states, and vapors may flash if an ignition source is present. Long term exposure to xylenes may damage the liver and kidneys, and xylenes may damage a developing fetus (New Jersey Dept. of Health).

3.2.6 Methyl tert-butyl ether

MTBE is a colorless liquid that has historically been used in gasoline as an octane booster and to reduce hazardous emissions from automobiles. MTBE is flammable in liquid and vapor states, and vapors may flash if an ignition source is present. Long term exposure to MTBE may cause damage to the kidneys (New Jersey Dept. of Health). The general use of MTBE in gasoline in the State of California was phased out in 2003. The State of California has classified MTBE as a carcinogen.

3.2.7 tert-Butanol

TBA is an oily, colorless liquid or solid with a mothball-like odor. TBA is used as a solvent for pharmaceuticals, as a paint remover and as an additive in unleaded gasoline. TBA is flammable as a solid or liquid and poisonous gases may be produced in a fire. TBA is not listed as a carcinogen or known to adversely affect reproduction; however high levels of exposure to TBA may affect kidney and liver function and be a respiratory and dermal irritant (New Jersey Dept. of Health).

3.3 FATE, TRANSPORT AND PERSISTENCE OF CHEMICALS OF CONCERN IN THE ENVIRONMENT

Chemical fate and transport is dependent on a variety of factors relating to the physical and chemical properties of the substance(s) released and the subsurface conditions at the release site. A full fate and transport analysis is beyond the scope of this document; however a general discussion of fate and transport of the chemicals of concern is provided below. Benzene and MTBE are classified by the State of California as carcinogens and represent the greatest potential risk to human health and the environment. Therefore, the fate, transport, and persistence discussion will focus on these two chemicals. Toluene, ethylbenzene, xylene isomers are anticipated to behave similarly to benzene.

A comparison of chemical properties of benzene and MTBE (Table 4) indicates MTBE is approximately 24 times more soluble in water than benzene. However, benzene has a higher soil sorption coefficient and higher retardation factor than MTBE. This indicates that MTBE is less inhibited by sorption onto soil particles and that MTBE migrates faster in groundwater than benzene.

Biodegradation and chemical oxidation commonly occur in the subsurface and may act to reduce benzene and/or MTBE concentrations over time. Biodegradation occurs when microorganisms in the subsurface consume a chemical under aerobic or anaerobic conditions. The rate at which biodegradation occurs is dependent on the types of microorganisms that are

present, environmental conditions, presence of sufficient nutrients to support the microorganisms, and the presence of electron acceptors. Benzene is reported to be biodegradable under aerobic conditions in surface water with a half-life ranging from a little as two days to 17 days; however, aerobic degradation is expected to occur more slowly in groundwater. Benzene biodegradation does not occur as readily under anaerobic conditions (New Jersey Dept. of Health).

Studies have shown that MTBE degrades under anaerobic conditions and through chemical oxidation processes resulting in residual TBA. MTBE typically persists longer in groundwater than benzene, apparently due to microbial preference for benzene and other compounds. Once benzene has been removed, degradation rates for MTBE typically increase (Wilson, et al, 2000). Other studies have shown that MTBE degrading aerobic microbes are relatively uncommon in the subsurface at most sites and that the addition of special cultures and nutrients is necessary to encourage aerobic degradation of MTBE (Spinnler, et al, 2001).

3.4 PATHWAYS OF EXPOSURE

The only natural pathway identified to date is groundwater, which has been identified to flow to the northwest, approximately eight feet bgs. Existing site improvements (asphalt pavement of parking lot and concrete slab or structure) are believed to have limited most natural pathways for exposure such as vertical migration of hydrocarbon vapors from soil and groundwater.

Man-made pathways for potential exposure that are believed to exist on-site and in the vicinity of the site include buried sewer, gas, electrical, and water conduits. In general, subsurface utilities are buried in trenches 18-inches to 3 feet bgs and in some instances can be buried down to 6 to 8 feet bgs beneath roadways.

Exposure pathways that were evaluated include:

3.4.1 Vapor Inhalation from Vertical Migration of Hydrocarbon Vapors

Vapor inhalation can occur if hydrocarbon vapors migrate through conduits from the subsurface such as foundation cracks. The site is currently paved with both asphalt and concrete. Due to the fact that the site building has a concrete foundation, risk from vapor inhalation would be very low at this site. Additionally, it is an operational gasoline service station with background hydrocarbon vapors already present.

3.4.2 Ingestion of Soil and Dust

Direct contact with impacted soil is unlikely to occur because the site is covered with asphalt and concrete. The potential for soil/dust ingestion may exist during future construction activities. However, there are no current intentions for construction activities at the site. Therefore, this exposure pathway is incomplete.

3.4.3 Dermal Contact with Soils or Groundwater

Direct contact with impacted soil is unlikely to occur because the site is covered with asphalt and concrete. The potential for dermal contact with soil/dust or groundwater may exist during future construction activities. However, there are no current plans for construction activities at the site. Therefore, this exposure pathway is incomplete.

3.5 RECEPTOR SURVEY

3.5.1 Adjacent Properties

Commercial properties are present in the vicinity of the site. The site is bounded on the north by Buena Vista Creek (north of Haymar Drive); on the south by a bank building; on the east by retail stores and a parking area; and on the west (across El Camino Real) by a restaurant and parking area. There are six shopping centers, two public parks, residential areas, Carlsbad High School, a cemetery, and Buena Vista Lagoon within a 1-mile radius of the site. The nearest surface water, located approximately 150 feet north off the site, is Buena Vista Creek.

3.5.2 Groundwater Production Wells

Groundwater at the site has designated beneficial uses for municipal, agricultural, and industrial supply services according to the RWQCB (1994). As of August 2004, there are no groundwater production wells within a one-half-mile radius of the project site, based on a review of the County of San Diego Department of Environmental Health database, the GeoTracker database, the United States Geologic Survey database, and a review of the USGS San Luis Rey California quadrangle topographic map (USGS 1967 photo revised 1975).

3.5.3 Surface Water

Buena Vista Creek runs parallel to Interstate 78 and discharges into Buena Vista Lagoon (located south of Highway 78 and west of Jefferson Street approximately 0.85-mile west of the site). The Buena Vista Watershed extends approximately 10.6 miles inland from the coast, totaling 14,437 acres and draining 21 square miles (Website, City of Oceanside Clean Water Program). The Watershed begins on the western slopes of the San Marcos Mountains, turns into a lagoon, and then discharges into the Pacific Ocean. Buena Vista Creek is downgradient of the site at an elevation approximately 20 feet lower than the site; therefore, it is a potential receptor. However, dissolved benzene and MTBE concentrations have been stable or decreasing for at least two years (Table 3) and the resulting groundwater plume has not been migrating for at least two years indicating plume stability in time and space. Therefore, Buena Vista Creek is not expected to be impacted and the pathway to exposure to this sensitive receptor is not complete.

3.5.4 Impact To Environmental Receptors

Buena Vista Creek was a potential sensitive receptor located 150 feet north of the project site. The creek is a concrete-lined channel discharging into Buena Vista Lagoon, which supports wetland and riparian habitat. As discussed above, the pathway to exposure to Buena Vista Creek is not complete.

3.5.5 Impact On Biological Receptors

The site is located in an urbanized area of the City of Carlsbad. No endangered plants or animals have been identified within the site boundaries. No nuisance or odor complaints have been made regarding the site.

3.6 EXTENT OF HYDROCARBON IMPACT TO SOIL

Hydrocarbons were first discovered during an excavation to replace a hydraulic lift in the service bay at the site in February 1987 (HLA, 1987a). The observed hydrocarbons were found just above the water table at an approximate depth of 8.5 feet below ground surface (bgs).

TPHg concentrations in soil samples collected from the stockpile generated from the product piping excavations in June 1997 ranged from 11 milligrams per kilogram (mg/kg) to 341 mg/kg. TPHd concentrations in these soil samples ranged from 52 mg/kg to 984 mg/kg (Table 2). The total recoverable petroleum hydrocarbon (TRPH) concentration in the soil collected from the stockpile generated from the used oil UST excavation was 521 mg/kg (Alton, 1997).

Historic soil borings and corresponding samples have been collected between February 1987 and June 1997. Historic Soil Analytical Results are outlined in Table 2 and Cumulative Soil Concentrations for TPHg, TPHd, and benzene are illustrated on Figure 7. Three historic soil borings contained concentrations of TPHg, or TPHd greater than 1,000 ppm. The lowest depth of impacted soil was found at MW-9 with 3,600 ppm TPHg at 10 feet bgs. The remaining impacted soil samples were collected in shallow samples along the old product line during the product line upgrade in September 1990. These samples ranged between non-detected to 2,900 ppm for TPHg and non-detected and 13,000 ppm TPHd.

The volume of soil with hydrocarbons was multiplied by the soil density to obtain the mass of soil with TPHg in the soil to obtain the total hydrocarbon mass present in soil. Concentrations were determined by graphically integrating concentration as a function of depth. The hydrocarbon mass present in the subsurface sediments at the site was estimated to be approximately 3,000 pounds. Based on work performed by various consultants from 1988 to 1998, Historic Soil Analytical Results are outlined in Table 2 and Cumulative Soil Concentrations for TPHg and benzene are illustrated on Figure 7.

3.7 EXTENT OF HYDROCARBON IMPACT TO GROUNDWATER

Groundwater monitoring and sampling has occurred on a semi-annual basis since the first sampling event on July 31, 1987 (Table 3). The maximum concentration of dissolved benzene was reported in the sample collected from well MW-9 at a level of 4,600 µg/L on April 13, 1993. The maximum MTBE concentration (36,000 µg/L) was reported in the sample collected from well MW-8 on November 19, 1994. Historically, varying apparent thickness of LNAPL was detected in four of the site's wells (MW-2, MW-3, MW-4, and MW-6). LNAPL has been absent from the site since May 21, 2002. Appendix A presents excerpts from groundwater monitoring reports for calendar years 2000, 2001, 2002, 2003, and 2004.

Eighteen wells were sampled following no-purge sampling procedures during the most recent comprehensive groundwater monitoring event performed on April 22, 2004. Groundwater sample analytical results for the site indicated that the highest TPHg concentration of 4,300 µg/L was present in MW-4 (SECOR, 2004). The highest benzene was reported at a concentration of 41 µg/L in MW-2. The highest MTBE concentration was found to be 1,700 µg/L in B-4. Table 3 presents all groundwater analytical results to date.

Four on-site groundwater monitoring wells (MW-2, MW-3, MW-4, and MW-6) historically have contained measurable apparent thicknesses of LNAPL. LNAPL apparent thicknesses have decreased slightly during each successive quarterly monitoring period. From May 2001 to January 2002, these wells have contained hydrocarbon sheens less than 0.01-feet thick (Table

3). As of May 2002, LNAPL has been absent from this site. Petroleum hydrocarbons have been in the dissolved phase in MW-2, MW-3, MW-4, and MW-6 since May 2002. Passive methods of LNAPL removal, including hand skimmers and bailers, have been utilized in these wells historically since 1993. Passive methods of LNAPL recovery were discontinued in second quarter 2003 when LNAPL levels had been minimized.

The dissolved phase plume is located in the northwest portion of the site and off-site in the downgradient direction into the intersection of Haymar Drive and El Camino Real. The plume extends northwest of the USTs and dispenser islands. The plume is stable in space and time and the dissolved concentrations are decreasing. Isoconcentration contour maps are depicted on Figures 8 and 9 (for dissolved benzene plume) and on Figures 10 and 11 (for dissolved MTBE plume trends). Comparison of the benzene and MTBE isoconcentration contour maps from October 2001 to April 2004 (Appendix A) and a historic isoconcentration map of benzene and TPHg from February 1993 (Figure 12) reveal the stable nature of the plume.

3.7.1 Historic LNAPL Extent

Groundwater monitoring wells are purged by hand bailing during the groundwater monitoring events and the LNAPL thickness is measured to evaluate the current thickness of LNAPL in the aquifer. Pre-existing LNAPL plume was assumed to be elliptical in the shape with a 50-foot major axis and a 25-foot minor axis. The volume of the plume was calculated assuming average LNAPL thickness of 0.1 feet. The amount of LNAPL historically, in groundwater was calculated to be approximately 18,000 pounds or 3,000 gallons.

3.7.2 Current Dissolved Hydrocarbon Extent

The volume of the current dissolved hydrocarbon concentrations was assumed to be cylindrical with a radius of 62 feet. The amount of dissolved hydrocarbons was calculated to be approximately 140 gallons. Evaluating historical groundwater data and isoconcentration maps, the volume of hydrocarbons in groundwater has decreased by approximately 95%.

4.0 DETERMINATION OF APPLICABLE CLEANUP LEVELS

SECOR proposes soil cleanup goals that will be protective of current and future groundwater quality. Current groundwater conditions do not pose a threat to human health, safety, or the environment. The site is located in a non-beneficial use area and is exempt from the municipal use designation under the terms and conditions of California State Water Resources Control Board Resolution No. 88-63, Sources of Drinking Water Policy. Therefore, proposed groundwater cleanup goals for the site are as follows:

- Remove any free product (LPH) to the extent possible. Achieve plume stabilization for the associated dissolved-phase hydrocarbon plume, thereby assuring that the groundwater plume is unable to spread to potable water areas that are not hydrocarbon-impacted. Stabilization further requires that the distribution pattern continues to contract, or at least remains stable, during seasonal changes in groundwater levels over an annual basis.
- Achieve site-wide groundwater concentrations, that are protective of human health for the nearest downstream sensitive receptor. These will be determined for site-specific parameters, using an approved human health risk model. All likely pathways of exposure will be evaluated, including vapor migration and inhalation. A potential cancer risk of 1-in-one-million, or less, must be achieved for each complete pathway of exposure.

The above groundwater cleanup goals are based on cleanup goals designated in the site Assessment and Mitigation Manual which states:

San Diego RWQCB - The San Diego RWQCB's Basin Plan identifies areas where groundwater has no designated beneficial uses. Cleanup levels in these areas will generally be defined by potential impacts to surface waters. The level of protection is based on the surface water beneficial uses, which will be established by the RWQCB on a case-by-case basis. Soil cleanups will be to a level that precludes the accumulation of non-aqueous phase liquid (NAPL) and ensures protection of human health and the environment. Removal of NAPL is the established groundwater remediation goal.

The reference to the Designated Level Methodology for Waste Classification and Cleanup Level Determination (RWQCB-CV, 1989) found in the CAP Reference Section is replaced by the reference to the February 18, 2004 Site Assessment and Mitigation Manual (County of San Diego SAM Program, 2004).

5.0 FEASIBILITY STUDY

The purpose of this section is to evaluate alternative strategies for site remediation, feasibility, and cost effectiveness. Based on the evaluation, the most appropriate and cost effective strategy is selected for implementation at the site. The main focus is the long-term protection of current and future beneficial groundwater uses in the area, with benzene and MTBE being the primary constituents of concern. The remedial strategy to be implemented was chosen based on the following objectives.

- a. Remove LNAPL;
- b. Stop further migration of the dissolved benzene and MTBE groundwater plume;
- c. Reduce the concentration of dissolved-phase hydrocarbons in the saturated zone to State of California MCLs;
- d. Reduce the source mass of hydrocarbons in vadose zone and capillary-fringe soil.

Objectives a. and b. listed above have already been achieved at this site. The migration of the groundwater plume has stopped and has been decreasing in size and concentration for greater than three years. LNAPL has been absent from the site since May 2002. The final remediation objectives (c and d) will be addressed in the following sections.

5.1 REMEDIAL TECHNOLOGY SCREENING

A list of proven remedial technologies (EPA, 1995) was screened for applicability at the site. A remedial technology screening matrix is presented as Table 5. Initial screening of these remedial technologies was performed to narrow down alternatives that are feasible for the site-specific conditions. Technologies that passed the initial screening are listed below:

Technology	Likelihood of achieving dissolved phase concentration reduction in existing wells
Natural Attenuation	Natural attenuation is apparently occurring at the site and will reduce dissolved phase concentrations over a period of time.
High Vacuum Dual-Phase Extraction (HVDPE)	Hydrocarbon vapor mass removed during interim MRS remediation events generally decreased. This technology is infeasible due to the amount of groundwater generated for treatment and high vapor phase flow rates making drawdown difficult during HVDPE (SECOR 2002).
Soil Vapor Extraction	Hydrocarbon vapor masses removed during MRS events generally decreased. This technology is infeasible due to the shallow water table at the site and low mass removal rate.
Air Sparging	This technology is infeasible due to the shallow water table at the site.
In-Situ Enhanced Bioremediation	Effective in reducing dissolved concentrations.
GW extraction for containment	Depth to groundwater is shallow at this site and this technology is expected to produce quantities of water that make cost effective treatment and disposal infeasible.

5.2 REMEDIAL ALTERNATIVES

The remedial technologies that passed the initial screening were used to develop three remedial alternatives that, in SECOR's opinion, can best achieve the remedial goals. The remedial alternatives have been chosen on the basis of data acquired from previous assessments, observed plume configuration, analyte concentration trend analysis, and periodic groundwater monitoring at the site. The advantages and disadvantages of the remedial action alternatives are summarized in Table 6. The site-specific factors affecting the screening process included historic plume stability for greater than two years, no sensitive receptors being affected and natural attenuation apparently occurring at the site. The selected alternatives are described below. Table 6 outlines the evaluation of the selected remedial alternatives in more detail.

5.2.1 Oxygen Releasing Compound (ORC®)

In-situ groundwater bioremediation stimulates growth and reproduction of indigenous microorganisms to enhance biodegradation of organic constituents in the saturated zone. For this CAP application, an oxygen-releasing compound is the technology used to enhance bioremediation.

Oxygen-Releasing Compound (ORC®) is a passive remediation method in which dissolved oxygen (DO) concentrations in groundwater are increased through the addition of ORC® solution or using ORC® socks. ORC® is a proprietary compound manufactured and marketed by Regenesis Bioremediation Products of San Clemente, California. The increased DO promotes aerobic biodegradation of dissolved phase petroleum hydrocarbons in groundwater. ORC® can be deployed without disrupting operations at the site, and it is a relatively low cost remediation method. Typically, once ORC® is deployed, DO concentrations are monitored on a regular basis to determine the need for replenishing the ORC®. Due to the passive nature of this groundwater remediation method, remediation would likely take 3 to 5 years to complete. The approximate cost of this remediation alternative is approximately \$14,000 (Table 7).

5.2.2 Iso-Gen™ Dissolved Oxygen Generator

The H₂O Technologies Iso-Gen™ system involves electrolysis of recirculated groundwater to remediate dissolved TPHg, benzene, and MTBE. Iso-Gen™ electrolytic cells are installed in existing groundwater monitoring wells. Impacted groundwater is pumped through an electrolytic cell where some of the water is broken down through electrolysis increasing the dissolved oxygen, and the treated water is discharged back into the aquifer. The treated water contains high dissolved oxygen concentrations, which promote aerobic biodegradation of hydrocarbons in the soil and groundwater surrounding the recirculation well. Because dissolved phase hydrocarbons are not volatilized, no vapor collection is necessary. Field parameters such as oxidation-reduction potential (ORP), ferrous iron, pH, and DO would be monitored. Iso-Gen™ can be implemented with a minimum of site disruption as the equipment has a small footprint and requires minimal trenching. The estimated cleanup time using the Iso-Gen™ technology is 36 months. The approximate cost of this remediation alternative is approximately \$36,500 (Table 8).

5.2.3 Remediation by Natural Attenuation

Remediation natural attenuation (RNA) is a passive remedial method. RNA is a multi-component process that incorporates biological mechanisms (biodegradation), chemical mechanisms (oxidation and hydrolysis), and physical mechanisms (dispersion, volatilization,

and sorption). Dissolved hydrocarbon plume is allowed to reach MCLs by natural attenuation. Groundwater monitoring data, and benzene and MTBE isoconcentration maps (Table 3 and Figures 8 through 12), show the dissolved benzene and MTBE concentrations have historically been decreasing. These data suggest that the remaining dissolved hydrocarbon concentrations in groundwater are currently being reduced through the processes of natural attenuation. Groundwater gauging and sampling will continue on a quarterly basis to monitor the natural attenuation of the hydrocarbon plume. There will be no cost associated with remediation by natural attenuation (Table 9).

Groundwater monitoring and sampling data collected from the wells have indicated consistent or decreasing benzene concentrations (Table 3). Most notable is the steady decrease in benzene concentrations reported for B-7 and MW-4. In June 1995, the maximum benzene concentration for B-7 was 1,600 µg/L. By May 2002, the benzene concentration was non-detectable for laboratory analysis and below MCLs and has remained non-detectable in April 2004. In June 1995, the maximum apparent thickness of LNAPL for the site was measured at 0.9 feet in MW-4. By October 2003, no LNAPL was present and the benzene concentration was reported to be 7.2 µg/L in MW-4 with a concentration of 6.7 µg/L as of April 2004. This data suggests that the dissolved phase hydrocarbon plume has not migrated and that the decrease in concentrations is likely due to the processes of natural attenuation, including biodegradation.

5.3 SELECTED REMEDIAL ALTERNATIVES

Based on evaluation of the three most suitable alternatives and review of soil and groundwater analytical data, SECOR recommends RNA at the site. Due to the limited presence of hydrocarbon-impacted soil (capillary fringe), and the decreasing size of the dissolved phase MTBE and benzene groundwater plumes, it appears that RNA will continue to decrease concentrations in soil and groundwater. Therefore, installation of a remediation system is not warranted.

SECOR recommends that no further action be required at the site, including groundwater monitoring. The greater than 13 years of quarterly groundwater monitoring data at the site suggests that the size and concentrations of the dissolved groundwater plume have decreased, and will continue to decrease with RNA.

Section 6 outlines in detail the estimated time for groundwater conditions to reach cleanup goals applying RNA.

6.0 ESTIMATED TIME FOR GROUNDWATER TO REACH CLEANUP GOALS

This section provides an estimate of the time required for groundwater concentrations below the site to reach State of California primary drinking water MCLs. It has already been demonstrated that the dissolved phase hydrocarbon plume below the site is stable and shrinking (Section 3.0). Of the 20 groundwater monitoring wells at the site, 13 have been near or below the MCLs for dissolved phase benzene and/or MTBE at the MCLs of 1.0 µg/L and 13 µg/L, respectively for at least one year. Recent dissolved phase benzene and MTBE concentrations in site wells are summarized in Table 3.

It has been observed that the attenuation of dissolved phase hydrocarbon concentrations at fuel hydrocarbon sites generally follows a first-order decay trend once the majority of hydrocarbon source material has been removed. The following equation has been used to describe the observed concentration decrease at a point (e.g. monitoring well) within a dissolved phase hydrocarbon plume:

$$C = C_0 e^{-kt}$$

Where: C = concentration at time t (µg/L)
 C_0 = peak concentration (µg/L)
 k = overall attenuation rate constant (days⁻¹)
 t = elapsed time after observation of peak concentration (days)

6.1 NATURAL ATTENUATION OF DISSOLVED CONSTITUENTS OF CONCERN

To estimate the time for remaining dissolved benzene and MTBE below the site to attenuate to MCLs, SECOR used concentration trends in key wells at the site to estimate first-order attenuation rate constants for benzene and MTBE. The attenuation rate constant was estimated by utilizing the equation above with the peak concentration (C_0) for the given well and the concentration from the most recent groundwater sampling event. This calculated first-order degradation rate constant gives an approximate natural attenuation rate around a given well. The resulting rate constants were then used to extrapolate the estimated time to reach MCLs at the site. This analysis was performed on wells with the historically highest dissolved levels of benzene and MTBE, which have been reported in wells B-7, MW-7, MW-8, and MW-9.

For benzene in well B-7, a data set beginning on June 16, 1995 with a concentration of 1,600 µg/L to April 22, 2004 with a concentration of <5.0 µg/L was used for analysis. A semi-log plot of benzene concentration versus time for well B-7 is presented as Figure 13. The best-fit line and equation are included on Figure 13. The slope of the best-fit line (0.0016 days⁻¹) is the estimated first-order attenuation rate constant for the data set. The first order decay equation and estimated rate constant are then used to estimate the time required for benzene concentrations to reach 1 µg/L. This method estimates that benzene concentrations in the vicinity of well B-7 will reach 1 µg/L in approximately four years by natural attenuation. Recent data shows the benzene concentrations were low to non-detect since May 21, 2002 which support this analysis, and corroborate the estimated time calculated from Figure 13.

This same approach was used to evaluate MTBE concentration data for well B-7. A data set beginning on June 16, 1995 with a concentration of 28,000 µg/L to April 22, 2004 with a concentration of 570 µg/L was used for analysis. A semi-log plot of MTBE concentration

versus time for well B-7 and the resulting best-fit line and equation are presented as Figure 13. The slope of the best-fit line (0.001 days^{-1}) was used to estimate that MTBE concentrations in the vicinity of well B-7 will reach $13 \text{ } \mu\text{g/L}$ in approximately twelve years with natural attenuation. A summary of the B-7 trend analysis is provided in Table 10.

For benzene in well MW-7, a data set beginning on November 5, 1997 with a concentration of $320 \text{ } \mu\text{g/L}$ to April 22, 2004 with a concentration of $8.8 \text{ } \mu\text{g/L}$ was used for analysis. A semi-log plot of benzene concentration versus time for well MW-7 is presented as Figure 14 including the best-fit line and equation. The slope of the best-fit line (0.0007 days^{-1}) is the estimated first-order attenuation rate constant for the data set. The first order decay equation and estimated rate constant were used to estimate that benzene concentrations in the vicinity of well MW-7 will reach $1 \text{ } \mu\text{g/L}$ in approximately sixteen years with natural attenuation. Recent benzene concentrations in well MW-7 were anomalous in comparison to trends for other wells at the site. Between the April 2, 2003 and April 22, 2004 sampling events concentrations increased from $0.94 \text{ } \mu\text{g/L}$ to $8.8 \text{ } \mu\text{g/L}$. The fluctuations in concentrations are likely attributed to changes in groundwater elevations re-wetting small pockets of residual hydrocarbon-impacted soil in the vicinity of these wells. The residual concentrations should decay through the processes of natural attenuation over time as well.

This same approach was used to evaluate MTBE concentration data for well MW-7. A data set beginning on April 7, 1999 with a concentration of $6,000 \text{ } \mu\text{g/L}$ to April 22, 2004 with a concentration of $950 \text{ } \mu\text{g/L}$ was used for analysis. A semi-log plot of MTBE concentration versus time for well MW-7 and the resulting best-fit line and equation are presented as Figure 14. The slope of the best-fit line (0.0004 days^{-1}) was used to estimate that MTBE concentrations in the vicinity of well MW-7 will reach $13 \text{ } \mu\text{g/L}$ in approximately thirty-seven years with natural attenuation. A summary of the MW-7 trend analysis is provided in Table 10.

A data set beginning on May 19, 1992 with a concentration of $2,600 \text{ } \mu\text{g/L}$ to April 22, 2004 with a concentration of $<2.0 \text{ } \mu\text{g/L}$ was used to calculate the natural attenuation rate constant of 0.0009 days^{-1} for benzene in groundwater surrounding MW-8. A semi-log plot of benzene concentration versus time for well MW-8 is presented in Figure 15. The first order decay equation and estimated rate constant were used to estimate that benzene concentrations in the vicinity of well MW-8 will reach $1 \text{ } \mu\text{g/L}$ in approximately twelve years with natural attenuation.

MTBE natural attenuation trends were calculated using a data set beginning on November 19, 1994 with a concentration of $36,000 \text{ } \mu\text{g/L}$ to April 22, 2004 with a concentration of $290 \text{ } \mu\text{g/L}$. A semi-log plot of MTBE concentration versus time for well MW-8 and the resulting best-fit line and equation are presented as Figure 15. The slope of the best-fit line (0.0012 days^{-1}) was used to estimate that MTBE concentrations in the vicinity of well MW-8 will reach $13 \text{ } \mu\text{g/L}$ in approximately eight years with natural attenuation. A summary of the MW-8 trend analysis is provided in Table 10.

For benzene in well MW-9, a data set beginning on April 13, 1993 with a concentration of $4,600 \text{ } \mu\text{g/L}$ to April 22, 2004 with a concentration of $28 \text{ } \mu\text{g/L}$ was used for analysis. A semi-log plot of benzene concentration versus time for well MW-9 with a best fit line and equation is presented as Figure 16. The slope of the best-fit line (0.0008 days^{-1}) is the estimated first-order attenuation rate constant for the data set. The first order decay equation and estimated rate constant are then used to estimate the time required for benzene concentrations to reach $1 \text{ } \mu\text{g/L}$. This method estimated that benzene concentrations in the vicinity of well MW-9 will reach $1 \text{ } \mu\text{g/L}$ in approximately eighteen years with natural attenuation.

To evaluate natural attenuation of dissolved MTBE in groundwater surrounding MW-9 a data set beginning on April 7, 1999 with a concentration of 420 µg/L to April 22, 2004 with a concentration of 16 µg/L was used for analysis. A semi-log plot of MTBE concentration versus time for well MW-9 and the resulting best-fit line and equation are presented as Figure 16. The slope of the best-fit line (0.0011 days^{-1}) was used in the trend analysis to estimate that MTBE concentrations in the vicinity of the well will consistently reach 13 µg/L in approximately four years with natural attenuation. A summary of the MW-9 trend analysis is provided in Table 10.

6.2 EVALUATION OF LNAPL REMOVAL TRENDS

Four wells (MW-2, MW-3, MW-4, and MW-6) were analyzed to determine the rate at which LNAPL removal has occurred and to estimate the time to reach the cleanup goals. Sorbent socks reduced LNAPL levels in these wells from January 1999 to January 2002 when product levels had been reduced to dissolved concentrations. Since LNAPL recently has been removed from this site, benzene and MTBE degradation rates were conservatively estimated by using the most conservative degradation rate from the analysis in Section 6.1 for each constituent. Benzene levels in these four wells are estimated to reach MCLs between nine to twenty-five years based on the trend analysis. Dissolved MTBE levels are expected to reach MCLs between eleven to thirty-one years. Refer to Figures 17 through 20 for a graphical representation of LNAPL levels and dissolved benzene and MTBE concentrations versus time.

6.3 ESTIMATED TIME TO REACH MCL CLEANUP LEVELS

Based on a review of the site data, the groundwater concentrations below the site should consistently reach MCLs between 20 and 30 years. This estimate allows for a reasonable amount of uncertainty due to the possible presence of small pockets of residual hydrocarbons below the site that could result in future short-term rises in benzene and MTBE concentrations above MCLs similar to the recent benzene and MTBE concentrations observed in well MW-1 and in wells with LNAPL. This estimate assumes that there are no additional releases at the site.

7.0 CORRECTIVE ACTION WORKPLAN

Based on the selection of Remedial Alternative 3, no further active remediation would be required. A workplan for the well abandonment will be prepared upon concurrence from SAM with this CAP and completion of the required 30-day public notification period.

The following are activities associated with decommissioning the groundwater monitoring wells at the subject site. Such activities include the destruction of 20 monitoring wells.

7.1 HEALTH & SAFETY PLAN

Prior to field work that is to be performed at the site, SECOR will prepare a site-specific health and safety plan (HASP) to address potential hazards at the site during the proposed field activities. The HASP will be reviewed, signed, and adhered to by all on-site personnel.

7.2 PERMITTING

Prior to fieldwork for removal of the wells, SECOR will prepare a well permit application for the destruction of 21 wells and submit the application to the DEH for approval. Additionally, SECOR will submit an encroachment permit application to the City of Carlsbad for approval.

7.3 DESTRUCTION OF GROUNDWATER MONITORING WELLS

Twenty existing on and off-site wells will be destroyed by overdrilling the wells to their respective total depths. Wells will be destroyed by removing all material in the original borehole, including casing, filter pack, and annular seal, and will be backfilled from the total depth to ground surface in accordance with the SAM Manual (SAM, 2004) and DWR Bulletins 74-81 and 74-90.

7.4 WASTE DISPOSAL

Wastes collected from the well destructions will be contained in properly labeled, open head 55-gallon drums with locking covers, and stored on-site. The drums will be transported to a state-certified treatment facility. Well casing and treatment system piping will be disposed of in an appropriate manner.

7.5 WELL DESTRUCTION REPORT

SECOR will prepare a report summarizing the well destruction as part of the permit requirement. The report will include a summary of the amounts of backfill materials used.

8.0 VERIFICATION MONITORING AND REPORTING PLAN

Further monitoring and reporting are unnecessary at the site because remediation by natural attenuation has been demonstrated by the existing monitoring program. It is SECOR's professional opinion that sufficient monitoring of the groundwater quality at the site has already occurred.

9.0 PUBLIC NOTIFICATION

A Public Notification Program will be implemented as part of the Corrective Action Plan approval process. This program will include distribution of Public Notices to adjacent local businesses, residences and the local planning agency. The public notice will describe the proposed CAP and invite interested parties to review the CAP at a local library and/or the offices of the SAM. There will be a 30-day period for the public to review the CAP and to comment directly to the SAM.

A sample public notification letter and list of addresses will be provided to SAM prior to beginning the 30-day public notification period (Appendix C).

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Website address: <http://waterdata.usgs.gov/nwis/inventory>, Visited August 2004, United States Geologic Survey (USGS).

Website address: http://www.oceansidecleanwaterprogram.org/bvc_w.asp, Visited 2003, City of Oceanside Clean Water Program.

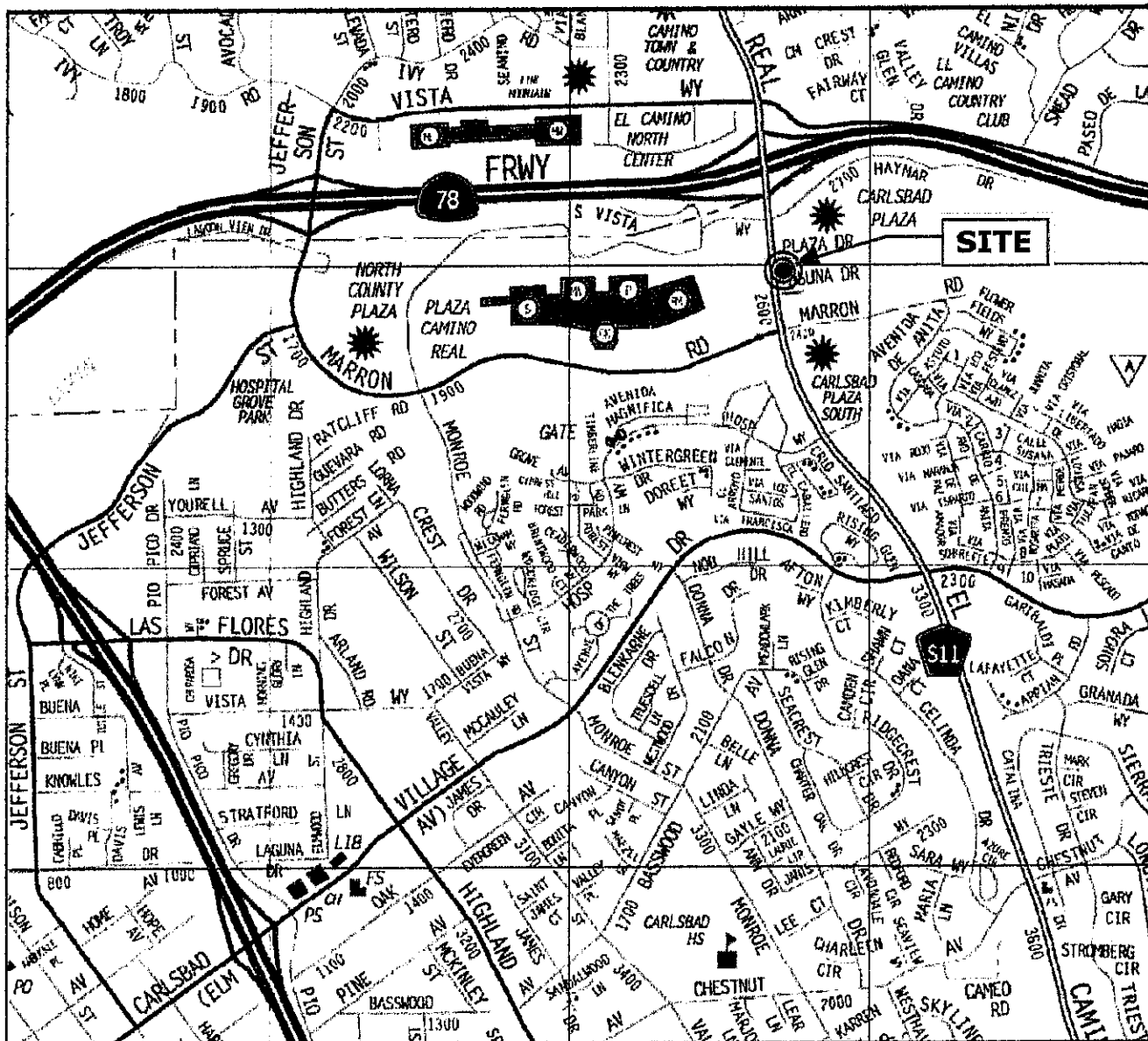
Website address: <http://www.state.nj.us/health/eoh/odisweb/>, Visited 2004, New Jersey Department of Health and Senior Services Hazardous Substance Fact Sheets.

Website address: <http://ccr.oal.ca.gov/>, Visited 2003, California Code of Regulations Office of Administrative Law, TITLE 8: General Industry Safety Orders, Chapter 4, Subchapter 7, Article 107, Section 5155, Table AC-1 for Airborne Contaminants (Revised 2002).

Website address: <http://www.cdc.gov/niosh/idlh/intridl4.html>, Visited 2003, National Institute for Occupational Safety and Health, Documentation for Immediately Dangerous to Life or Health Concentrations (IDLHs) (Revised 1995).

Website address: <http://geotracker.swrcb.ca.gov>, Visited August 2004, State Water Resources Control Board, GeoTracker (Revised August 2004).

FIGURES



REFERENCE: THOMAS GUIDE CD-ROM, PAGE & GRID 1106 G3.



0 1320 2640

APPROXIMATE SCALE IN FEET

NOTES:

FIGURE 1

SITE LOCATION MAP

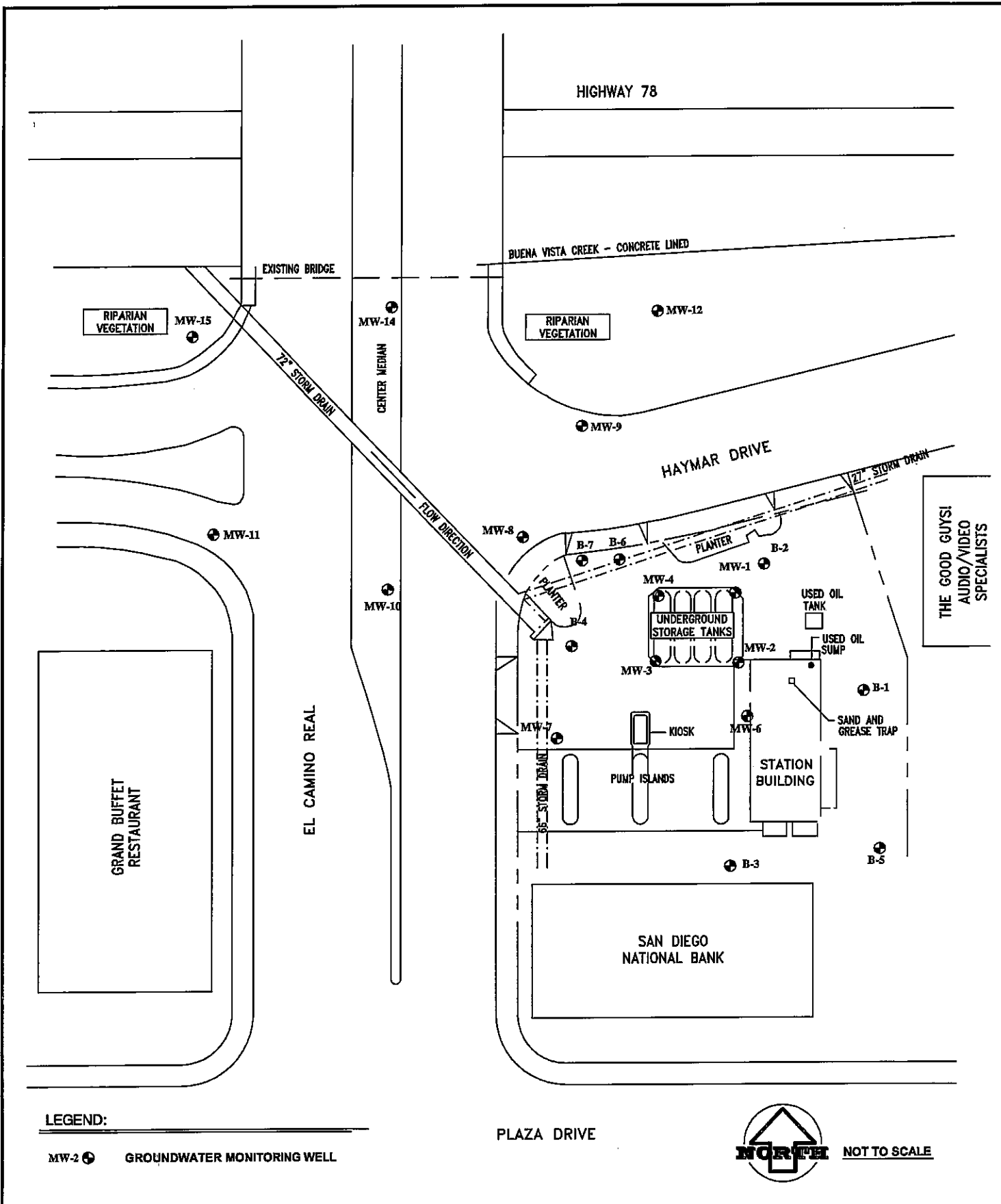
CHEVRON
STATION NO. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA


SECOR

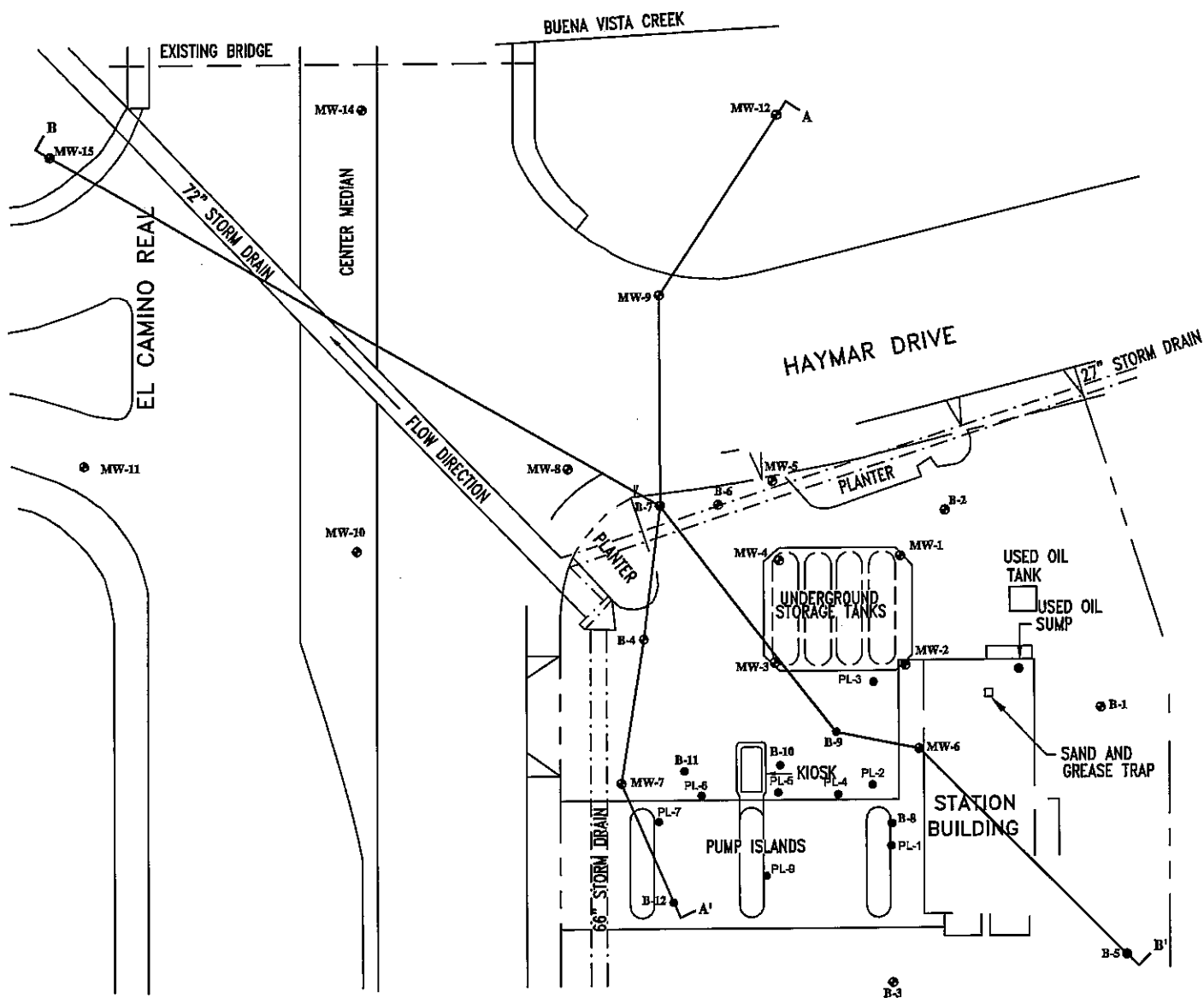
International Incorporated
2855 CAMINO DEL RIO N., SUITE 302
SAN DIEGO, CA 92108

...2002dwg\Chevron2002\9-1312-212\9-1312SLOC.RWG

PROJECT: OBCH.51312.00 DATE: 8/8/02



 <p>SECOR 2655 CAMINO DEL RIO NORTH, SUITE 302 SAN DIEGO, CALIFORNIA PHONE: (619) 296-6195/298-6199 (FAX)</p>	<p>FOR:</p> <p>CHEVRON STATION NO. 9-1312 2500 El Camino Real Carlsbad, California</p> <p>JOB NUMBER: 08CH.51312.00</p> <p>DRAWN BY: RJO</p>	<p>SITE VICINITY MAP</p> <p>CHECKED BY:</p> <p>APPROVED BY:</p>	<p>FIGURE:</p> <p>2</p> <p>DATE: 05/14/04</p>
---	--	--	--



LEGEND:

MW-2 ● GROUNDWATER MONITORING WELL
 A A' CROSS SECTION CUT LINES



25 0 50
 SCALE: 1" = 50'

NOTES:

SITE PLAN ADAPTED FROM
 BBC ENVIRONMENTAL, INC. FIGURE.

FIGURE: 3

CROSS SECTION INDEX MAP

CHEVRON STATION NO. 9-1312
 2500 EL CAMINO REAL
 CARLSBAD, CALIFORNIA

SECOR
 International Incorporated
 2655 CAMINO DEL RIO N., SUITE 302
 SAN DIEGO, CA. 92108

PROJECT: 08CH.51312.00 DATE: 3/10/03

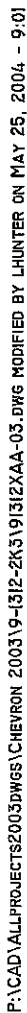
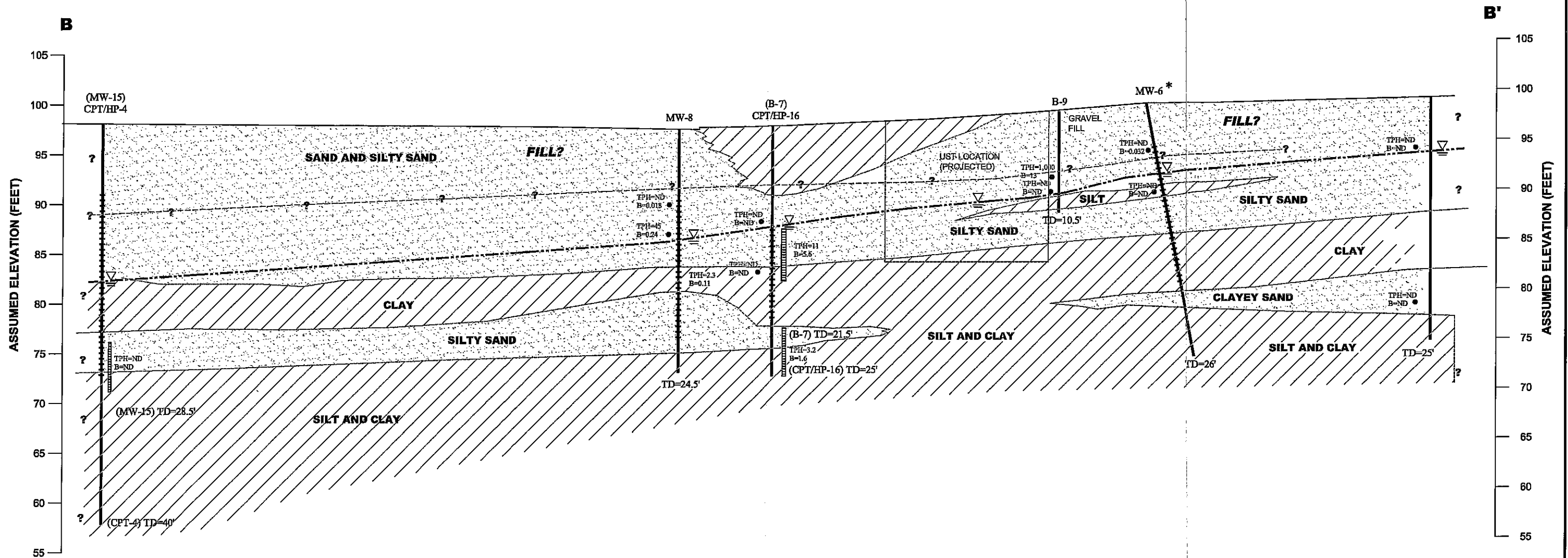


FIGURE 4
GEOLOGIC
CROSS SECTION A-A'

P:\CAD\ALLPROJECTS\2003\9-1312-2K3191312\BB-03.DWG MODIFIED BY LHUNTER ON MAY 25, 2004 - 9:05



LEGEND

- GROUNDWATER ELEVATION (FEET) BASED ON 8-1-92 MEASUREMENTS RELATIVE TO HLA TEMPORARY BENCH MARK OF 100.00 FEET ASSUMED ELEVATION
- SOIL SAMPLE
- CONTACT, DASHED WHERE APPROXIMATE
- APPROXIMATE LIMIT OF FILL
- TPH TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (MILLIGRAMS PER KILOGRAM [mg/kg])
- B BENZENE (mg/kg)
- ND NOT DETECTED
- * WELL MW-6 WAS INSTALLED AT AN ANGLE OF 23° FROM VERTICAL; THE APPARENT ANGLE OF THE WELL IS SHOWN ON THE CROSS SECTION
- CPT/HP-16 CONE PENETROMETER TEST WITH HYDROPUNCH SAMPLE TAKEN

- CPT-4 CONE PENETROMETER TEST SOUNDING LOCATION
- MW-6 MONITORING WELL LOCATION
- B-9 BORING LOCATION

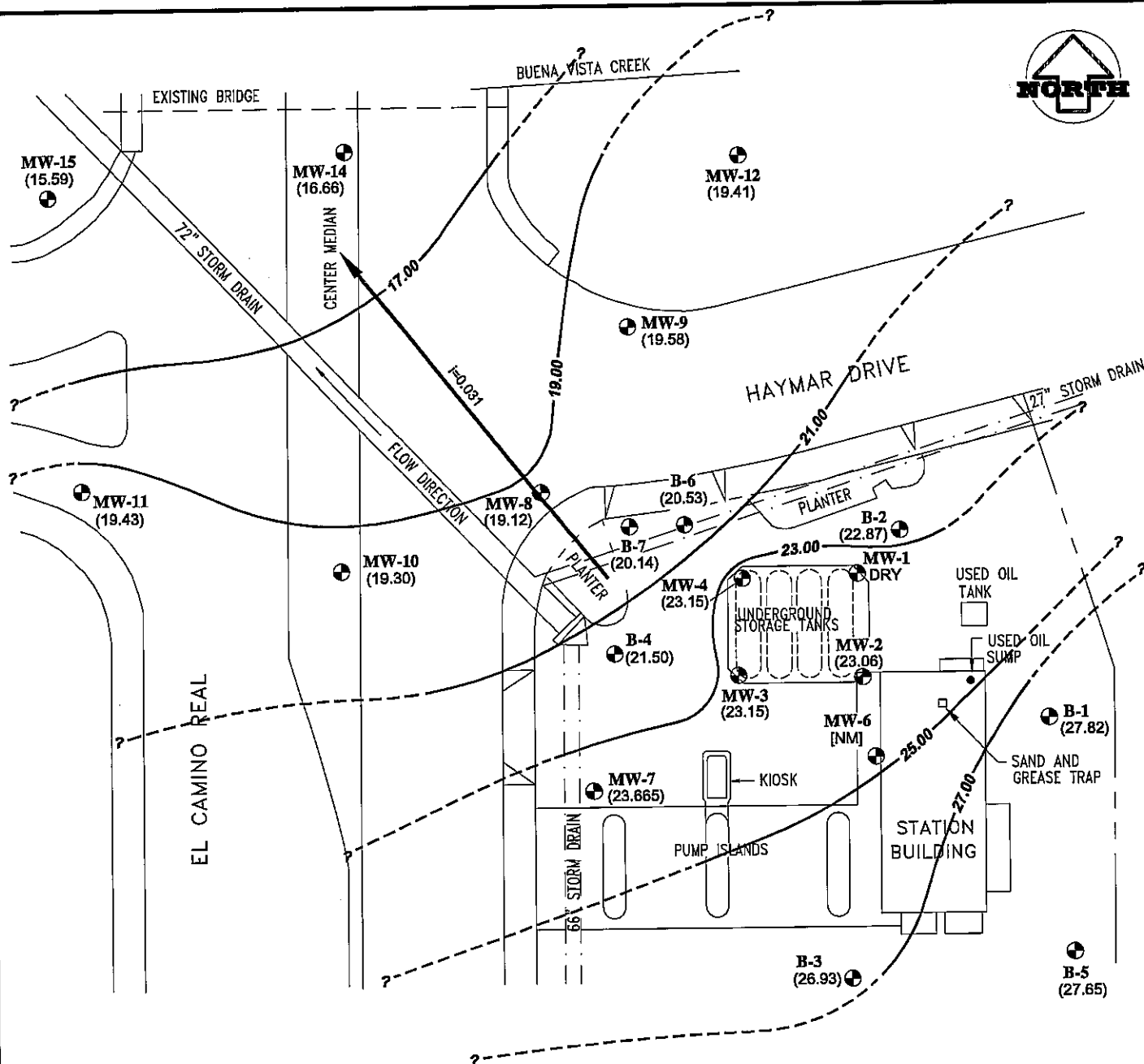
- OBSERVATION WELL SLOTTED INTERVAL
- TOTAL DEPTH OF BORING
- TOTAL DEPTH OF CPT
- HYDROPUNCH SAMPLE LOCATION

DRAWN BY: _____
CHECKED: _____
APPROVED: _____
DATE: 8/25/03
JOB No.: 08CH.51312.03
CAD FILE: 91312XBB-03

PREPARED BY:
SECOR
2655 Camino del Rio North, Suite 302
San Diego, California

PREPARED FOR:
CHEVRON STATION NO. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

FIGURE 5
GEOLOGIC
CROSS SECTION B-B'



25 0 50
SCALE: 1" = 50'

DRAWN BY: PD
CHECKED:
APPROVED:
DATE: 8/31/04
JOB No.: 08CH.41312.04
CAD FILE: 91312GW4-04

PREPARED BY:

SECOR
2655 Camino del Rio North, Suite 302
San Diego, California

PREPARED FOR:

CHEVRON STATION NO. 9-1312
2500 El Camino Real
Carlsbad, California

FIGURE: 6
GROUNDWATER GRADIENT MAP
APRIL 22, 2004



SCALE: 1" = 50'

DISTRIBUTION OF TPHg, TPHd AND BENZENE IN SOIL FEB 1987 - AUG 1992

HIGHWAY 78



BUENA VISTA CREEK - CONCRETE LINED

EXISTING BRIDGE

RIPARIAN VEGETATION

MW-15
(NS)

MW-14
(<0.50)

RIPARIAN VEGETATION

MW-12
(<0.50)

72" STORM DRAIN

CENTER MEDIAN

HAYMAR DRIVE

MW-9
(360)

MW-8
(89)

B-6
(<0.50)

B-7
(<2.5)

MW-1
(DRY)

B-2
(<0.50)

MW-11
(NS)

MW-10
(<0.50)

MW-4
(72)

MW-3
(11)

MW-2
(64)

USED OIL TANK

USED OIL SUMP

B-1
(NS)

SAND AND GREASE TRAP

MW-7
(<5.0)

B-4
(<0.50)

MW-6
(NS)

B-3
(<0.50)

B-5
(NS)

GRAND BUFFET RESTAURANT

EL CAMINO REAL

PUMP ISLANDS

KIOSK

UNDERGROUND STORAGE TANKS

STATION BUILDING

SAN DIEGO NATIONAL BANK

PLAZA DRIVE

THE GOOD GUYS!
AUDIO/VIDEO
SPECIALISTS

LEGEND:

- MW-2 GROUNDWATER MONITORING WELL
- (<1.0) BENZENE CONCENTRATION IN MICROGRAMS PER LITER ($\mu\text{g/L}$)
- ESTIMATED BENZENE ISOCONCENTRATION CONTOUR IN $\mu\text{g/L}$, QUERIED WHERE UNKNOWN
- < BELOW LABORATORY REPORTING LIMIT
- [NS] NOT SAMPLED

NOT TO SCALE



SECOR

2655 CAMINO DEL RIO NORTH, SUITE 302
SAN DIEGO, CALIFORNIA
PHONE: (619) 296-6185/296-6199 (FAX)

FOR:

CHEVRON STATION NO. 9-1312
2500 El Camino Real
Carlsbad, California

**DISSOLVED BENZENE
ISOCONCENTRATION MAP
OCTOBER 22, 2003**

FIGURE:

8

JOB NUMBER:

08CH.51312.04

DRAWN BY:

PD

CHECKED BY:

APPROVED BY:

DATE:

8/31/04

HIGHWAY 78



BUENA VISTA CREEK - CONCRETE LINED

EXISTING BRIDGE

RIPARIAN
VEGETATION

MW-15
(<0.50)

MW-14
(<0.50)

RIPARIAN
VEGETATION

MW-12
(<0.50)

72" STORM DRAIN

CENTER MEDIAN

HAYMAR DRIVE

MW-9
(28)

MW-8
(<2.0)

MW-11
(<0.50)

MW-10
(<0.50)

B-2
(<0.50)

MW-1
[DRY]

B-6
(<0.50)

B-7
(<5.0)

MW-4
(6.7)

B-4
(<5.0)

MW-3
(1.6)

MW-7
(8.8)

B-1
(<0.50)

USED OIL
TANK

USED OIL
SUMP

SAND AND
GREASE TRAP

B-3
(<0.50)

B-5
(<0.50)

KIOSK

PUMP ISLANDS

UNDERGROUND
STORAGE TANKS

STATION
BUILDING

SAN DIEGO
NATIONAL BANK

GRAND BUFFET
RESTAURANT



EL CAMINO REAL

FLOW DIRECTION

THE GOOD GUYS!
AUDIO/VIDEO
SPECIALISTS

PLAZA DRIVE

LEGEND:

- MW-2  **GROUNDWATER MONITORING WELL**
- (<1.0) **BENZENE CONCENTRATION IN MICROGRAMS PER LITER ($\mu\text{g/L}$)**
-  **ESTIMATED BENZENE ISOCONCENTRATION CONTOUR IN $\mu\text{g/L}$, QUERIED WHERE UNKNOWN**
- $<$ **BELOW LABORATORY REPORTING LIMIT**
- [NS] **NOT SAMPLED**

NOT TO SCALE



SECOR

2655 CAMINO DEL RIO NORTH, SUITE 302
SAN DIEGO, CALIFORNIA
PHONE: (619) 296-6195/296-6199 (FAX)

FOR:

CHEVRON STATION NO. 9-1312
2500 El Camino Real
Carlsbad, California

**DISSOLVED BENZENE
ISOCONCENTRATION MAP
APRIL 22, 2004**

FIGURE:

9

JOB NUMBER:

08CH.51312.04

DRAWN BY:

PD

CHECKED BY:

APPROVED BY:

DATE:

8/31/04

HIGHWAY 78



BUENA VISTA CREEK - CONCRETE LINED

EXISTING BRIDGE

RIPIARIAN VEGETATION

MW-15
(NS)

MW-14
(<1.0)

RIPIARIAN VEGETATION

MW-12
(<1.0)

72" STORM DRAIN

CENTER MEDIAN

MW-9
(8.4)

HAYMAR DRIVE

MW-11
(NS)

MW-10
(1.0)

FLOW DIRECTION

MW-8
(290)

B-6
(75)

B-7
(500)

B-2
(<1.0)

USED OIL TANK
USED OIL SUMP

MW-1
(DRY)

MW-4
(200)

MW-3
(290)

MW-2
(19)

MW-6
(NS)

SAND AND GREASE TRAP

B-1
(NS)

GRAND BUFFET RESTAURANT

EL CAMINO REAL

KIOSK
PUMP ISLANDS

MW-7
(8,300)

STATION BUILDING

B-3
(<1.0)

B-5
(NS)

SAN DIEGO NATIONAL BANK

PLAZA DRIVE

THE GOOD GUYS!
AUDIO/VIDEO SPECIALISTS

LEGEND:

- MW-2 GROUNDWATER MONITORING WELL
- (<1.0) MTBE CONCENTRATION IN MICROGRAMS PER LITER ($\mu\text{g/L}$)
- ESTIMATED MTBE ISOCONCENTRATION CONTOUR IN $\mu\text{g/L}$, QUERIED WHERE UNKNOWN
- MTBE METHYL TERT-BUTYL ETHER
- < BELOW LABORATORY REPORTING LIMIT
- [NS] NOT SAMPLED

NOT TO SCALE



SECOR

2655 CAMINO DEL RIO NORTH, SUITE 302
SAN DIEGO, CALIFORNIA
PHONE: (619) 296-6195/296-6199 (FAX)

FOR:

CHEVRON STATION NO. 9-1312
2500 El Camino Real
Carlsbad, California

**DISSOLVED MTBE
ISOCONCENTRATION MAP
OCTOBER 22, 2003**

FIGURE:

10

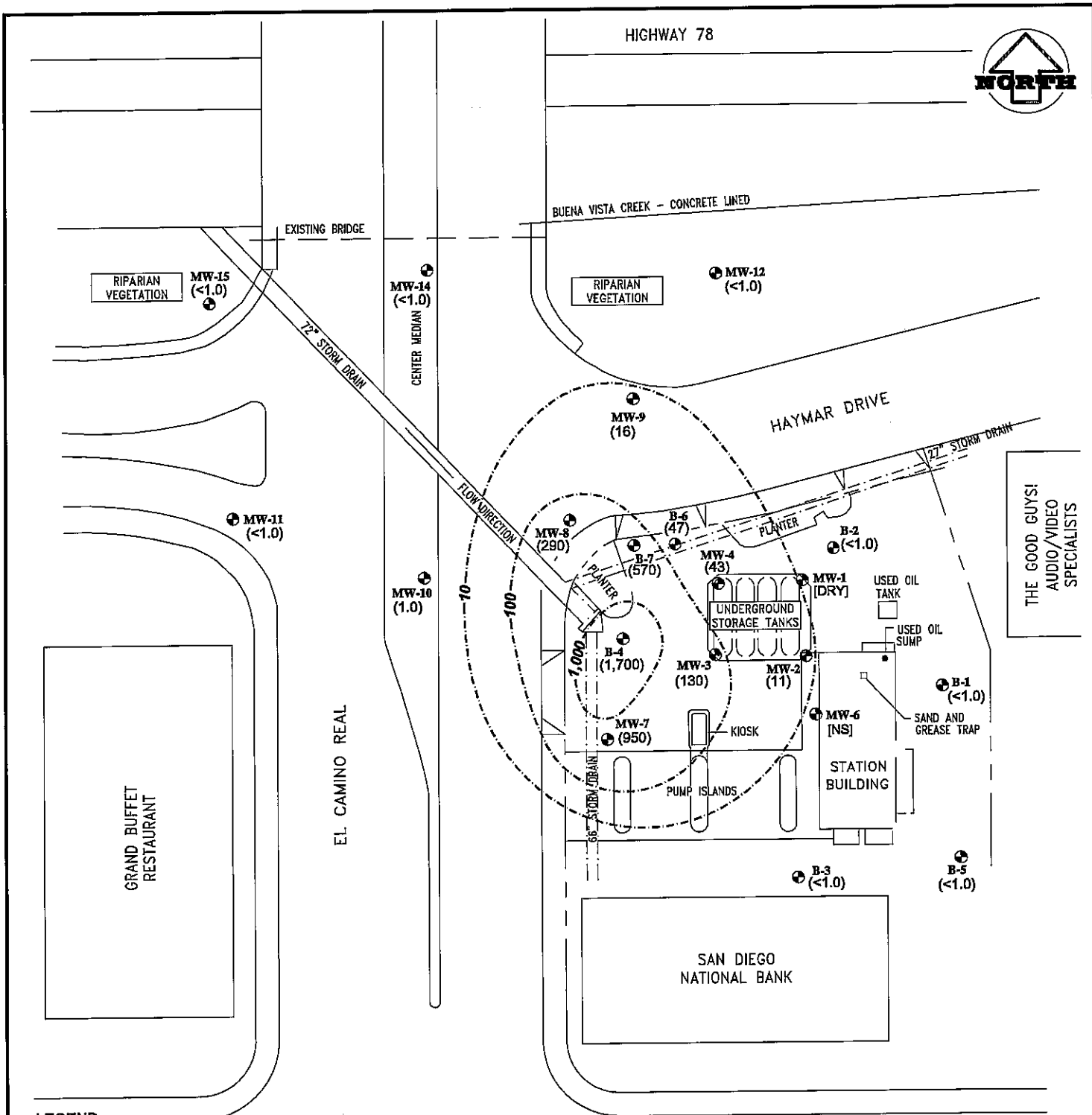
JOB NUMBER:
08CH.51312.04

DRAWN BY:
PD

CHECKED BY:

APPROVED BY:

DATE:
8/31/04



LEGEND:

- MW-2 **GROUNDWATER MONITORING WELL**
 (<1.0) **MTBE CONCENTRATION IN MICROGRAMS PER LITER (µg/L)**
 10 **ESTIMATED MTBE ISOCONCENTRATION CONTOUR IN µg/L, QUERIED WHERE UNKNOWN**
 MTBE **METHYL TERT-BUTYL ETHER**
 < **BELOW LABORATORY REPORTING LIMIT**
 [NS] **NOT SAMPLED**

NOT TO SCALE



SECOR

2655 CAMINO DEL RIO NORTH, SUITE 302
 SAN DIEGO, CALIFORNIA
 PHONE: (619) 296-6195/296-6199 (FAX)

FOR:

CHEVRON STATION NO. 9-1312
 2500 El Camino Real
 Carlsbad, California

JOB NUMBER:

08CH.51312.04

DRAWN BY:

PD

CHECKED BY:

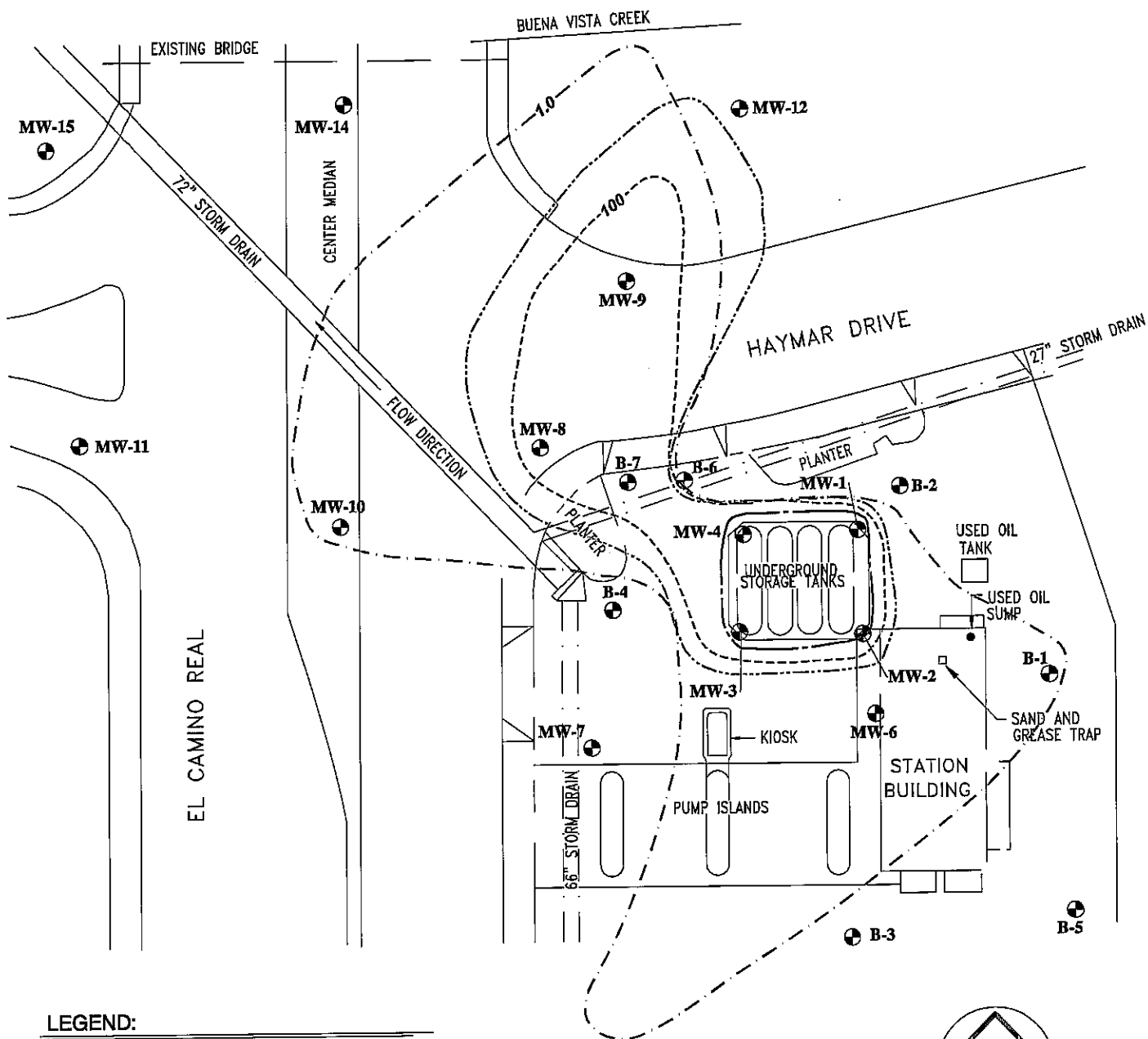
APPROVED BY:

FIGURE:

11

DATE:

8/31/04



LEGEND:

- MW-2 GROUNDWATER MONITORING WELL
- 1.0--- ESTIMATED EXTENT OF BENZENE PLUME >1.0 ug/l
- 100--- ESTIMATED EXTENT OF BENZENE PLUME >100 ug/l
- ESTIMATED EXTENT OF FREE HYDROCARBON PRODUCT (FHP)
- ESTIMATED EXTENT OF DISSOLVED PETROLEUM HYDROCARBON PLUME (TPH)



25 0 50
SCALE: 1" = 50'

SECOR
International Incorporated
2655 CAMINO DEL RIO N., SUITE 302
SAN DIEGO, CA. 92108

PROJECT: 08CH.51312.04 DATE: 8/31/04

NOTES:

SITE PLAN ADAPTED FROM
BBC ENVIRONMENTAL, INC. FIGURE.

FIGURE 12

**DISSOLVED BENZENE AND
TPHg ISOCONCENTRATION
MAP - FEBRUARY 1993**

CHEVRON STATION NO. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

Figure 13
Natural Attenuation Trend Evaluation for B-7
Chevron Station 9-1312

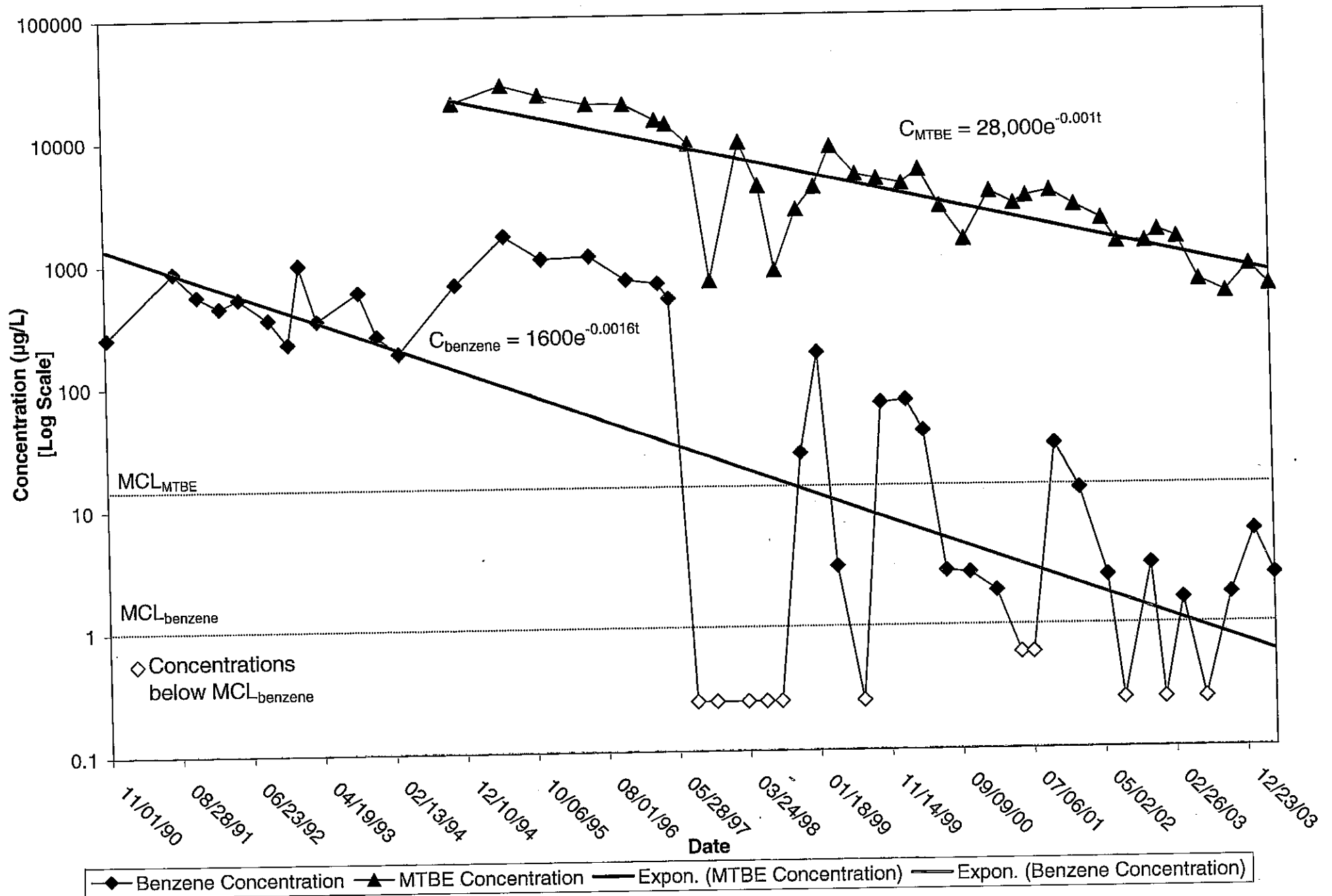


Figure 14
Natural Attenuation Trend Evaluation of MW-7
Chevron Station 9-1312

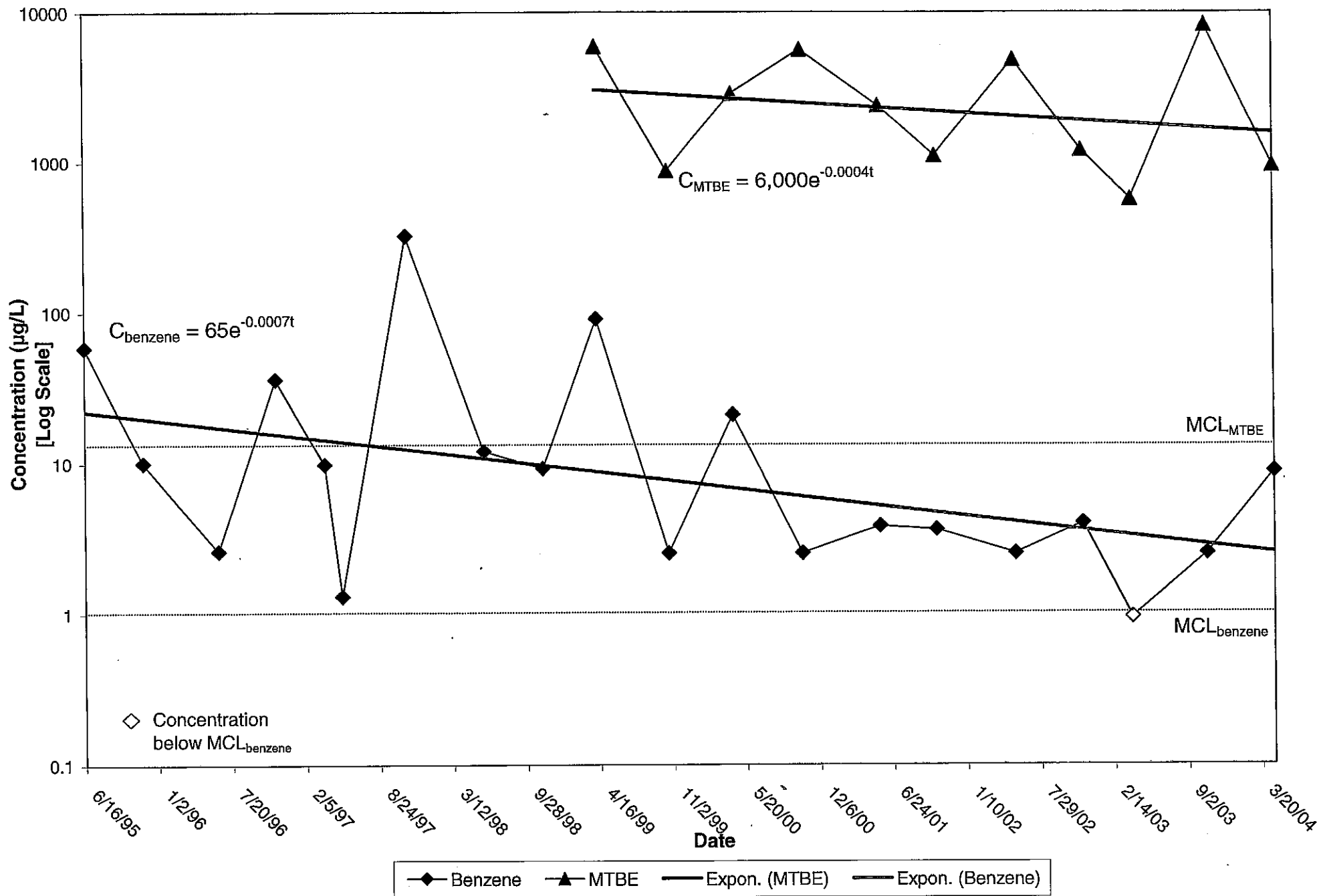


Figure 15
Natural Attenuation Trend Evaluation of MW-8
Chevron Station 9-1312

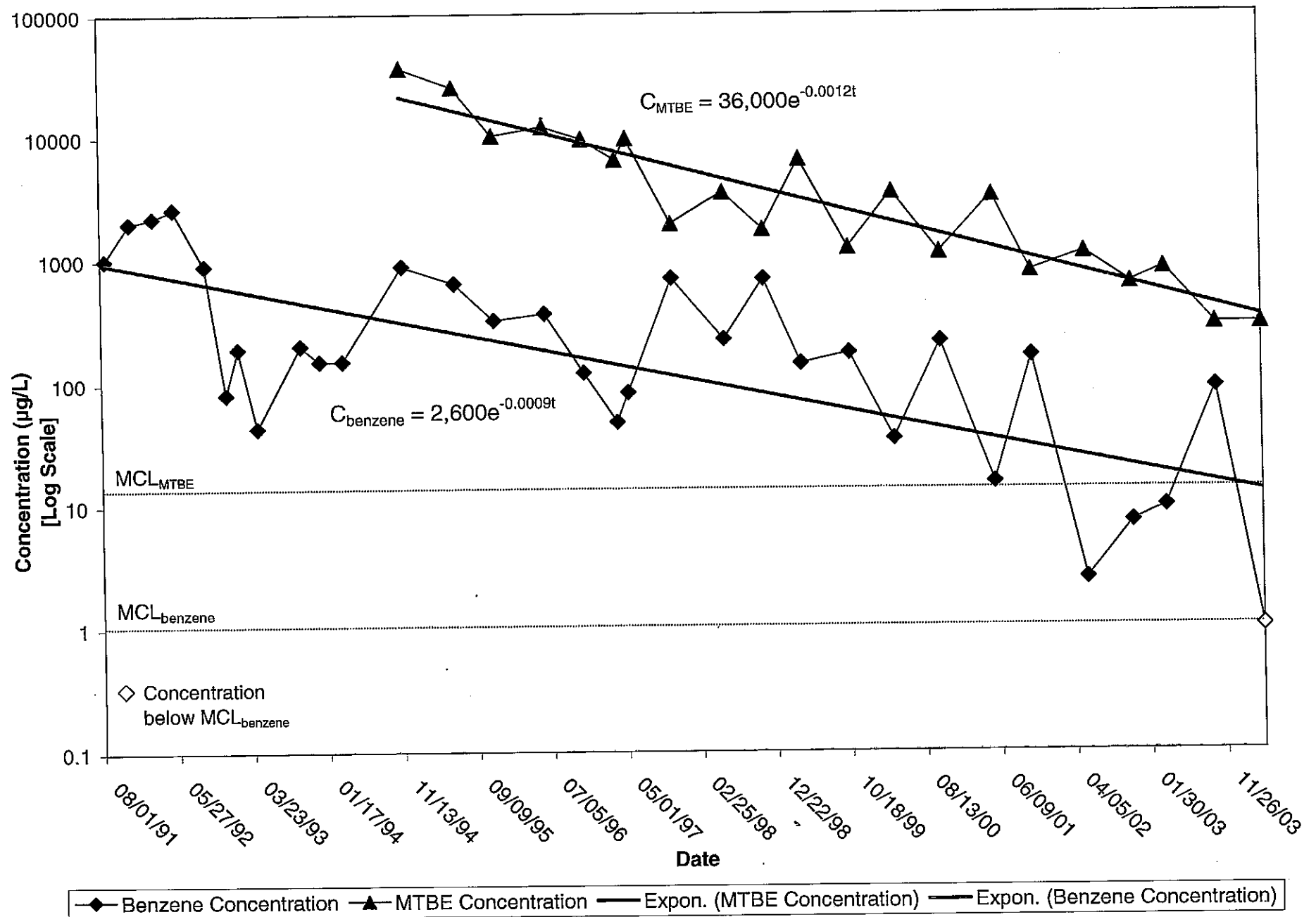


Figure 16
Natural Attenuation Trend Evaluation for MW-9
Chevron Station 9-1312

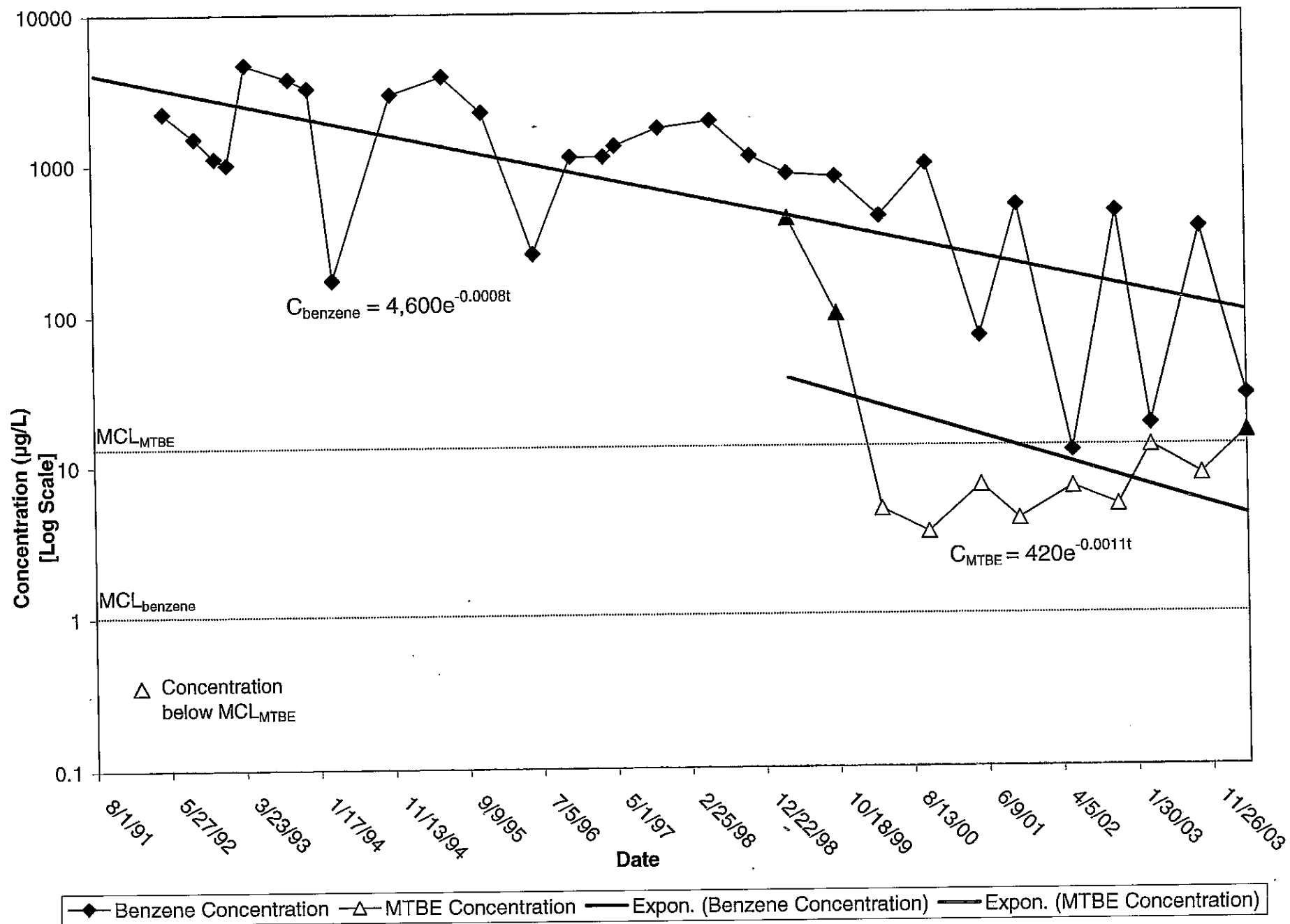


Figure 17
Natural Attenuation Trend Evaluation for MW-2
Chevron Station 9-1312

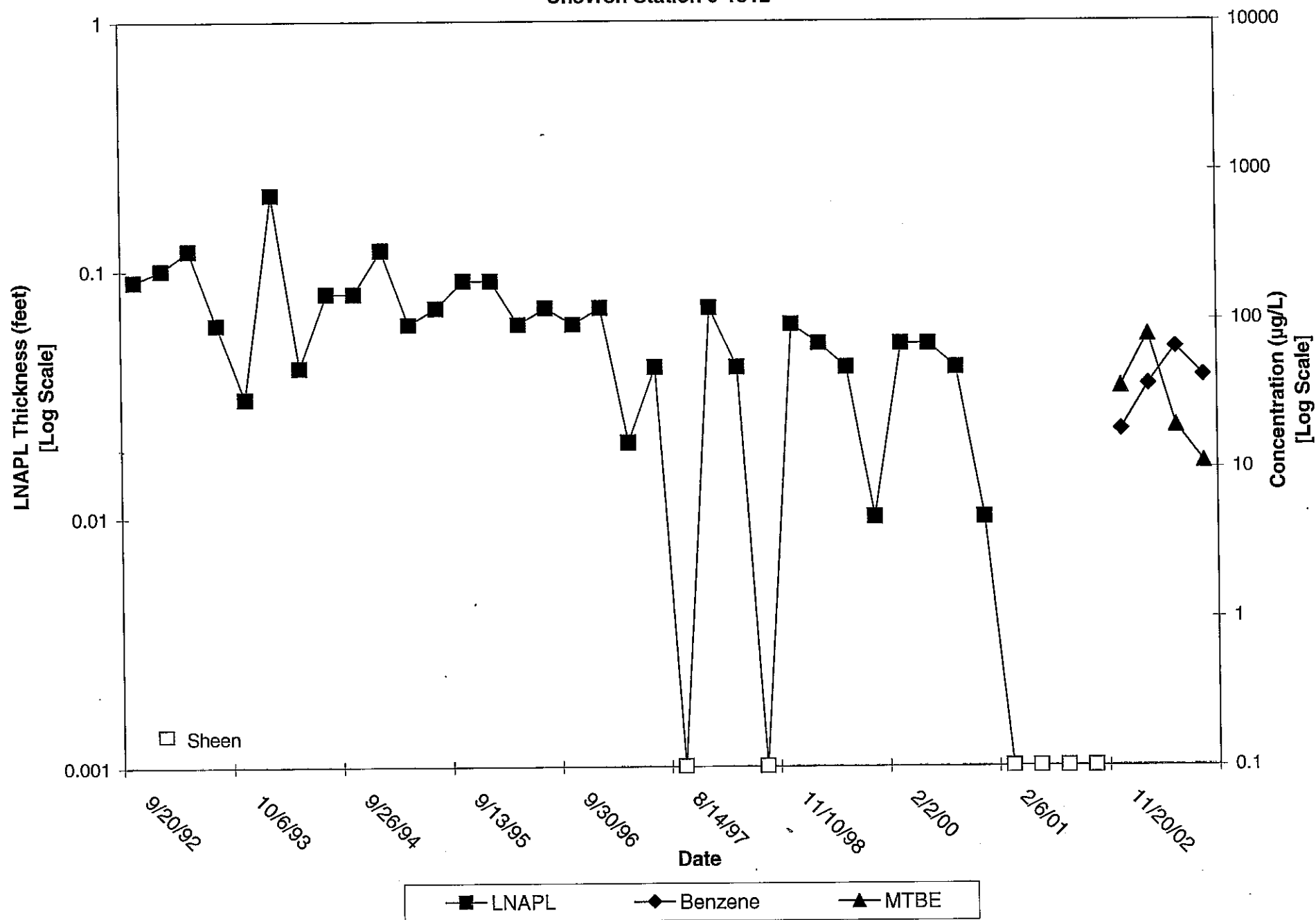


Figure 18
Natural Attenuation Trend Evaluation for MW-3
Chevron Station 9-1312

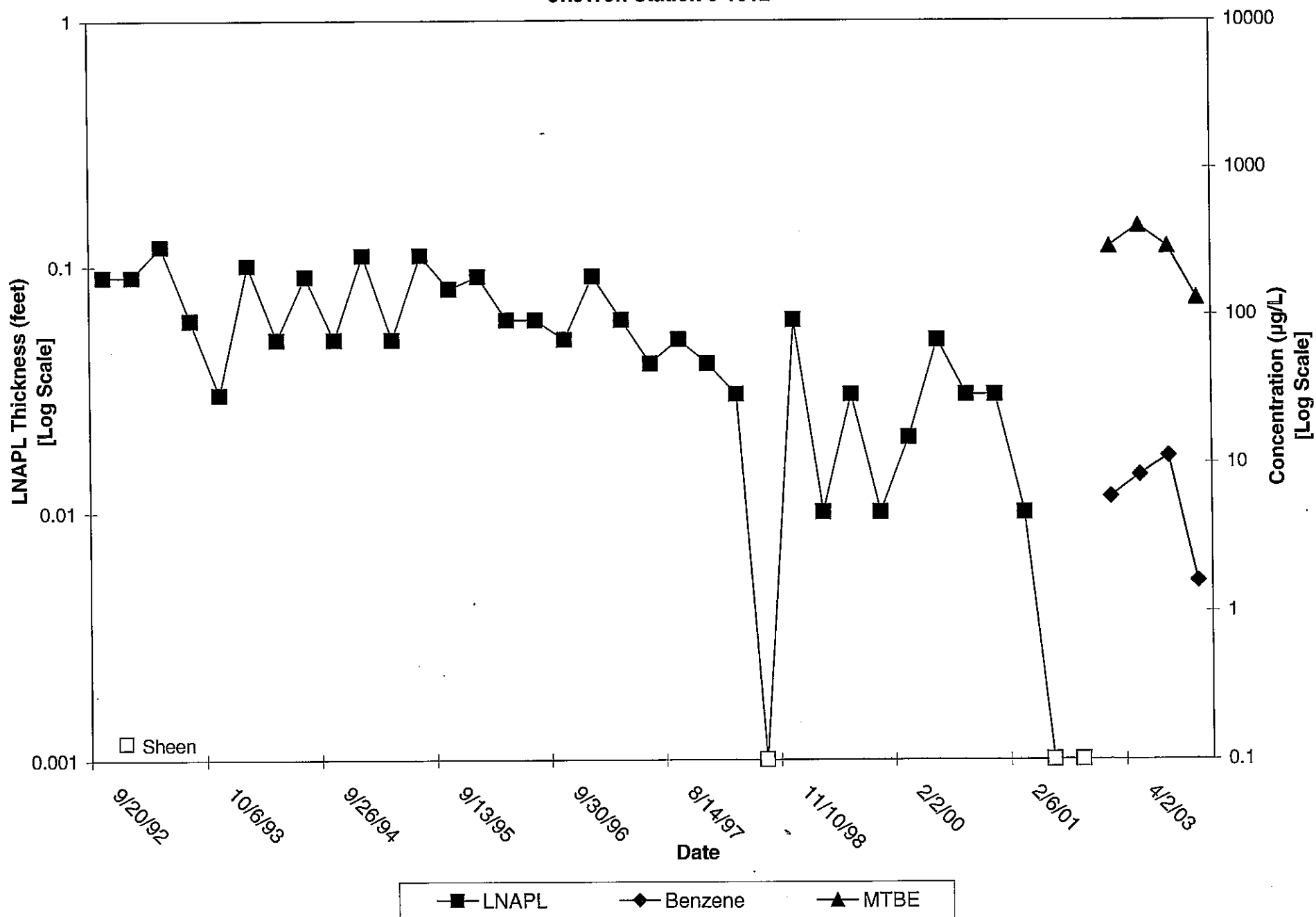


Figure 19
Natural Attenuation Trend Evaluation for MW-4
Chevron Station 9-1312

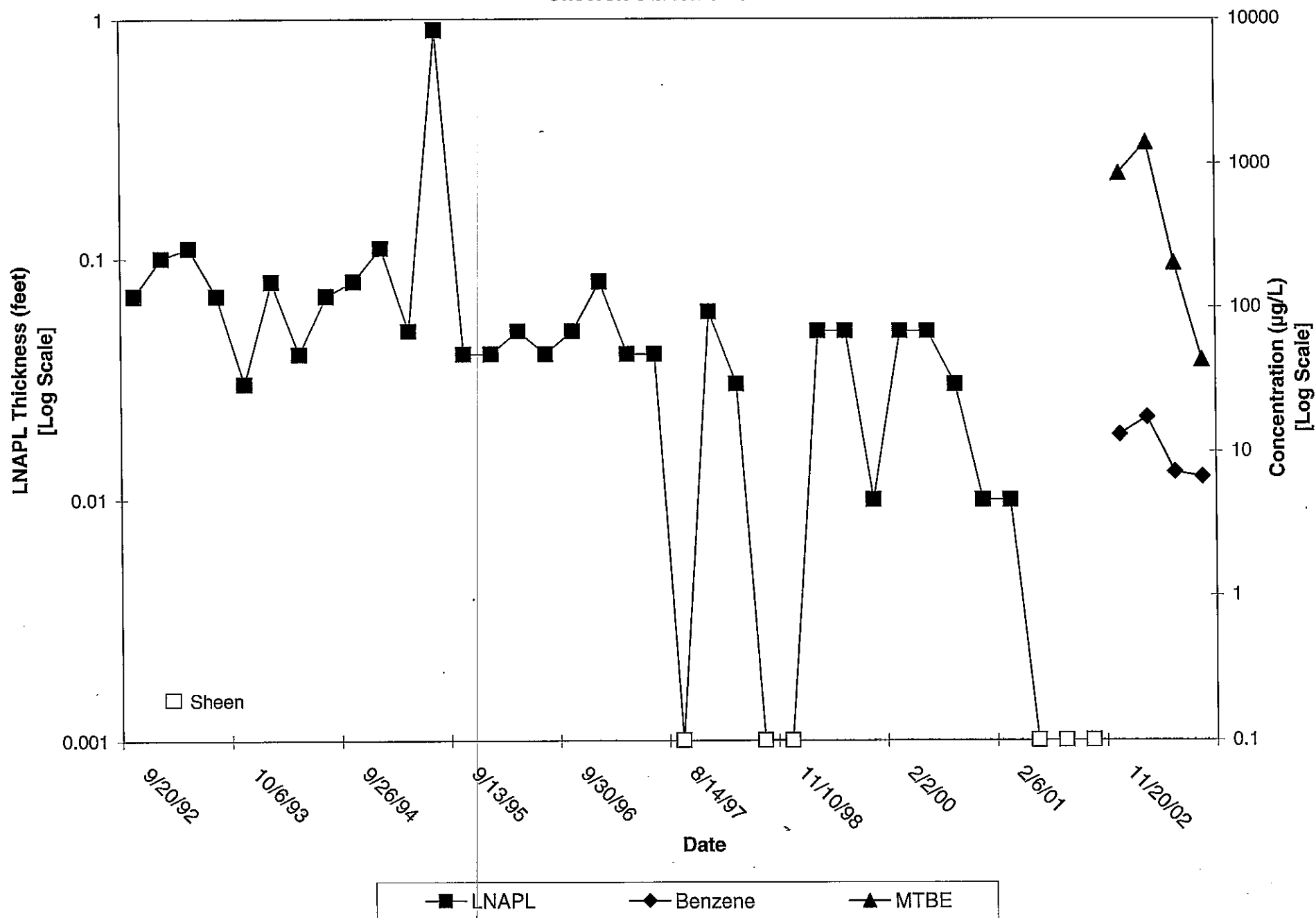
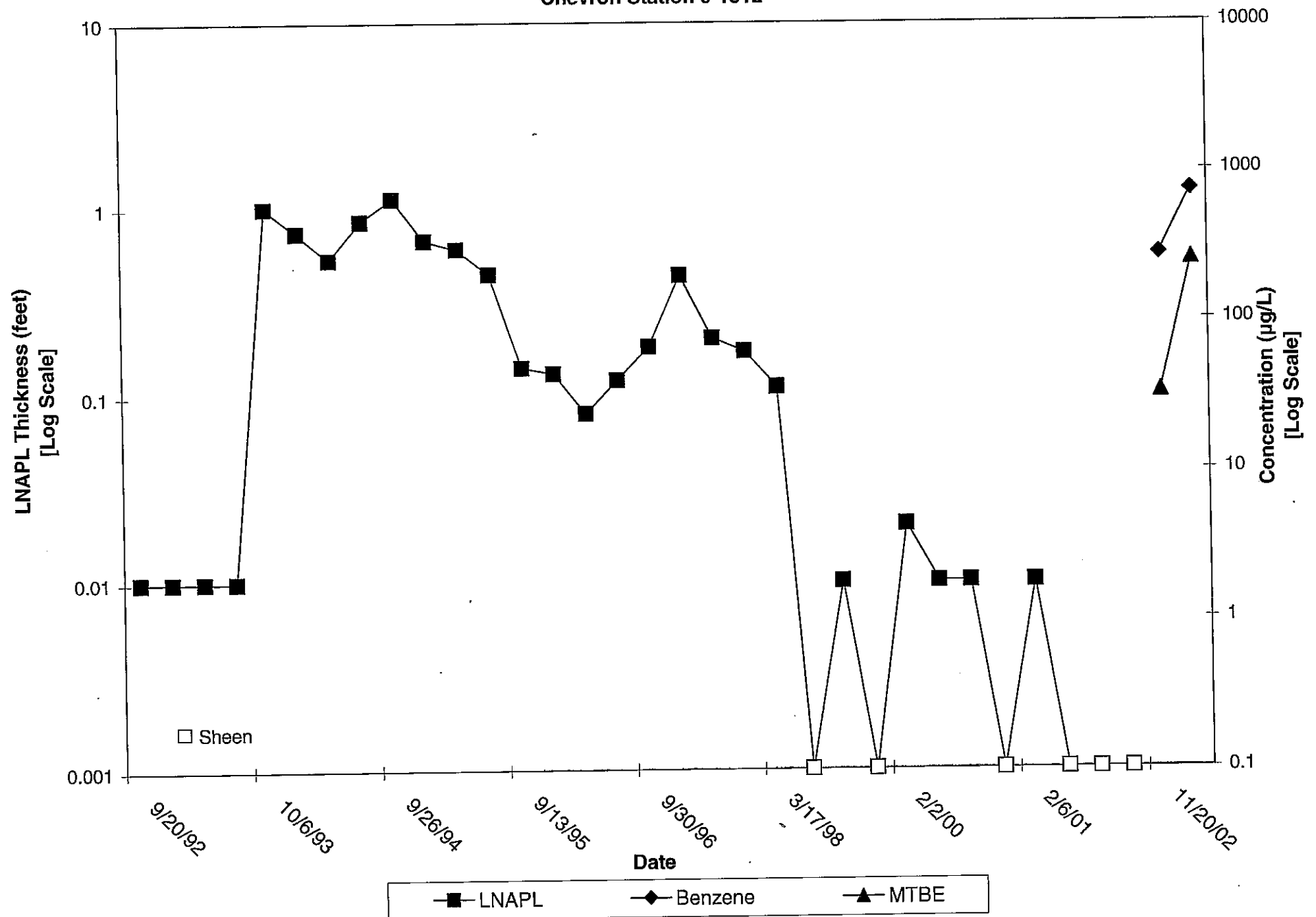


Figure 20
Natural Attenuation Trend Evaluation for MW-6
Chevron Station 9-1312



TABLES

TABLE 1
SUMMARY OF BENEFICIAL USES
Chevron Service Station No. 9-1312

Carlsbad Hydrologic Unit (HU 904.00)
El Salto Hydrologic Subarea (HSA 904.21)

Beneficial Uses	Groundwater	Surface Water
Municipal and Domestic Supply (MUN)	●	+
Agricultural Supply (AGR)	●	●
Industrial Service Supply (IND)	○	●
Contact Water Recreation (REC-1)	--	●
Non-contact Water Recreation (REC-2)	--	●
Warm Freshwater Habitat (WARM)	--	●
Wildlife Habitat (WILD)	--	●
Rare, Threatened, or Endangered Species (RARE)	--	●

Notes: * From California State Water Resources Control Board and Regional Water Quality Control Board, San Diego Region, "Water Quality Control Plan San Diego Region, Basin (9), 1994"

- = Existing Beneficial Use
- = Potential Beneficial Use
- ⊕ = Exempted from Municipal
- = Not Applicable

Table 2
Historic Soil Analytical Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	Sampled Depth (feet)	TPHg [1] (mg/kg)	TPHd [1] (mg/kg)	Benzene [2] (mg/kg)	Toluene [2] (mg/kg)	Ethyl- benzene [2] (mg/kg)	Total Xylenes [2] (mg/kg)
B-1	2/20/87	13-13.5	<5.0	--	0.039	0.058	<0.025	0.054
B-2	2/20/87	13-13.5	<5.0	--	<0.025	<0.025	<0.025	<0.05
B-3	2/20/87	4-4.5	2900	--	0.59	19	32	189
	2/20/87	8-8.5	<5.0	--	0.031	<0.025	<0.025	0.29
B-4	2/20/87	8-8.5	<5.0	--	<0.025	0.027	<0.025	0.149
B-5	7/31/87	15.0-15.5	<5.0	--	<0.025	<0.025	<0.025	<0.025
	7/31/87	20.5-21.0	<5.0	--	<0.025	<0.025	<0.025	<0.025
B-6	7/31/87	10.5-11.0	<5.0	--	0.027	0.028	0.12	0.63
	7/31/87	20.5-21.0	<5.0	--	<0.025	<0.025	<0.025	<0.025
B-7	4/3/89	9.50	<10	--	<0.005	0.007	<0.005	<0.015
	4/3/89	14.50	<10	--	<0.005	<0.005	<0.005	<0.015
B-8	6/17/91	4-4.6	59	--	0.053	0.37	0.64	4.2
	6/17/91	8-8.6	<10	--	0.008	0.02	0.006	0.046
	8/14/91	7.5	<10	<10	0.018	0.007	0.006	0.073
	8/14/91	10.5	45	<10	0.24	2.3	0.92	6.3
	8/18/92	6.0	<10	<10	0.014	0.014	<0.005	0.017
B-8A	10/2/91	4.0	NA	<10	NA	NA	NA	NA
	10/2/91	6.5	NA	1500	NA	NA	NA	NA
B-9	6/17/91	6.6-7	1000	--	13	65	24	120
	6/17/91	8-8.6	<10	--	<0.005	<0.005	<0.005	<0.015
	8/14/91	6.0	<10	<10	0.054	0.011	0.067	0.034
	8/14/91	10.0	3600	<10	27	240	74	480
	8/18/92	6.0	<10	<10	0.04	0.009	<0.005	0.018
	8/18/92	8.5	<10	<10	0.012	0.011	<0.005	<0.015
B-9A	10/2/91	6.5	NA	<10	NA	NA	NA	NA
	10/2/91	8.0	NA	<10	NA	NA	NA	NA
B-10	6/17/91	3.6-4	<10	--	0.038	<0.005	0.033	0.11
	6/17/91	5.6-6	<10	--	<0.005	<0.005	<0.005	<0.015
	8/18/92	6.0	<10	<10	0.01	0.01	<0.015	<0.015
B-10A	10/2/91	3.5	NA	<10	NA	NA	NA	NA
	10/2/91	5.5	NA	<10	NA	NA	NA	NA
B-11	6/17/91	6-6.6	<10	--	<0.005	0.017	0.006	0.057
	6/17/91	9-9.6	<10	--	<0.005	<0.005	<0.005	<0.015
B-11A	10/2/91	6.0	NA	<10	NA	NA	NA	NA
	10/2/91	8.0	NA	<10	NA	NA	NA	NA
B-12	6/18/91	4-4.6	13	--	0.075	0.039	0.17	0.87
	6/18/91	6-6.6	<10	--	<0.005	<0.005	<0.005	<0.015
B-12A	10/2/91	4.0	NA	<10	NA	NA	NA	NA
	10/2/91	6.0	NA	<10	NA	NA	NA	NA
B-13	8/18/92	6.0	<10	<10	0.014	0.014	<0.005	0.017
B-14	8/18/92	6.0	<10	<10	0.04	0.009	<0.005	0.018
	8/18/92	8.5	<10	<10	0.012	0.011	<0.005	<0.015
B-15	8/18/92	6.0	<10	<10	0.01	0.01	<0.005	<0.015

Table 2
Historic Soil Analytical Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	Sampled Depth (feet)	TPHg [1] (mg/kg)	TPHd [1] (mg/kg)	Benzene [2] (mg/kg)	Toluene [2] (mg/kg)	Ethyl-benzene [2] (mg/kg)	Total Xylenes [2] (mg/kg)
MW-5	4/3/89	--	<10	--	0.006	0.025	0.051	0.058
MW-6	6/18/91	5.6-6	<10	--	0.032	<0.005	<0.005	<0.015
	6/18/91	10-10.6	<10	--	<0.005	<0.005	<0.005	<0.015
MW-6A	10/2/91	4.0	NA	<10	NA	NA	NA	NA
	10/2/91	6.5	NA	<10	NA	NA	NA	NA
MW-7	6/18/91	5-5.6	730	--	6.4	46	22	130
	6/18/91	9.6-10	<10	--	0.028	<0.005	<0.005	<0.015
MW-7A	10/2/91	5.00	--	<10	--	--	--	--
	10/2/91	7.50	--	<10	--	--	--	--
MW-8	8/14/91	7.50	<10	--	0.018	0.007	0.006	0.073
	8/14/91	8-10.5	45	--	0.24	2.3	0.92	6.3
MW-9	8/14/91	6.0	<10	--	0.054	0.011	0.067	0.034
	8/14/91	10.0	3600	--	27	240	74	480
PL-1	9/10/90	1.0	<10	<10	<0.005	<0.005	<0.005	<0.005
	9/12/90	4.0	250	--	0.18	3.8	7.4	55
PL-2	9/10/90	3.0	2900	7800	12	75	32	200
	9/12/90	4.5	610	1200	3.9	47	25	140
PL-3	9/10/90	3.5	700	<10	0.063	1.4	4.6	43
PL-4	9/10/90	2.0	450	9200	0.21	6.0	3.7	28
PL-5	9/10/90	2.5	2700	390	0.9	13	15	84
	9/12/90	4.5	200	<10	0.2	4.5	6.6	40
PL-6	9/10/90	2.0	500	2300	<0.1	0.18	2.2	25
	9/12/90	5.5	18	140	0.007	0.008	0.19	1.6
PL-7	9/10/90	2.0	1500	2900	10	66	20	150
	9/12/90	3.5	96	250	0.015	0.11	0.73	9.2
PL-8	9/10/90	2.0	210	13000	<0.1	0.12	0.24	1.1
PL-9	9/10/90	1.0	850	<10	0.58	26	17	120
	9/12/90	3.5	26	--	0.058	0.57	0.76	4.7
SP-1	9/17/90	1.0	<10	200	<0.005	<0.005	<0.005	0.017
SP-2	9/17/90	1.5	73	250	<0.005	<0.005	0.01	73
PE	1/26/98	1-3	<10	--	--	--	--	--
		2-3.5	<10	--	--	--	--	--
		3-3	<10	--	--	--	--	--
		4-3.5	<10	--	--	--	--	--
		5-4	<10	--	--	--	--	--
RF-1	6/26/97	3.0	ND	ND	--	--	--	--
NSW	6/26/97	8.0	ND	ND	--	--	--	--
SSW	6/26/97	8.0	ND	ND	--	--	--	--
DISP-1	6/26/97	4.0	ND	ND	--	--	--	--
DISP-2	6/26/97	4.0	ND	ND	--	--	--	--
DISP-3	6/26/97	4.0	ND	ND	--	--	--	--

Table 2
Historic Soil Analytical Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	Sampled Depth (feet)	TPHg [1] (mg/kg)	TPHd [1] (mg/kg)	Benzene [2] (mg/kg)	Toluene [2] (mg/kg)	Ethyl- benzene [2] (mg/kg)	Total Xylenes [2] (mg/kg)
DISP-4	6/26/97	4.0	ND	ND	--	--	--	--
DISP-5	6/26/97	4.0	ND	ND	--	--	--	--
DISP-6	6/26/97	4.0	ND	ND	--	--	--	--

Notes: All concentrations expressed in milligrams per kilogram (mg/kg)

TPHg Total Petroleum Hydrocarbons characterized as Gasoline

TPHd Total Petroleum Hydrocarbons characterized as Diesel

NA Not analyzed

ND Not detected above the laboratory method detection limit

< Less than the laboratory method detection limit indicated

[1] Analyzed by EPA Method 8020

[2] Analyzed by EPA Method 8015 Modified

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
B-1	7/31/87	4.70	93.90	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
98.60	12/21/88	4.80	93.80	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--
	11/8/90	4.79	93.81	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	8/19/91	4.59	94.01	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	8/26/91	--	--	--	--	<100	--	--	--	--	--	--	--	--	--	--
	11/26/91	4.90	93.70	--	ND	<100	ND	ND	ND	ND	--	--	--	--	--	--
	2/27/92	4.87	93.73	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	5/19/92	4.48	94.12	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	9/20/92	4.68	93.92	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	12/10/92	4.82	93.78	--	ND	--	1.1	1.5	0.40	2.6	--	--	--	--	--	--
	1/28/93	4.54	94.06	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	4/13/93	4.16	94.44	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	10/6/93	4.24	94.36	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	12/21/93	4.24	94.36	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/22/94	4.13	94.47	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	6/18/94	4.01	94.59	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/26/94	4.08	94.52	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/19/94	4.22	94.38	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/15/95	4.28	94.32	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/95	3.64	94.96	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	9/13/95	3.78	94.82	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/21/95	3.84	94.76	--	ND	--	0.60	1.0	ND	1.6	ND	--	--	--	--	--
	2/19/96	4.10	94.50	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/96	3.74	94.86	--	ND	--	3.9	4.6	0.90	3.3	ND	--	--	--	--	--
	9/30/96	3.86	94.74	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/14/96	3.96	94.64	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/27/97	3.67	94.93	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	5/12/97	3.64	94.96	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	8/14/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/17/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/3/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/7/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/26/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/21/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
B-1 continued 30.66	10/19/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/2/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/11/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/6/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/18/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/9/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/01	3.18	95.42	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	1/28/02	3.37	95.23	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/21/02	3.34	95.26	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25
	7/25/02	3.21	95.39	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/20/02	3.24	27.42	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	1/13/03	3.26	27.40	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/2/03	3.33	27.33	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/2/03	2.95	27.71	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/22/03	3.00	27.66	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/30/04	2.97	27.69	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/22/04	2.84	27.82	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25
B-2 97.19	7/31/87	9.69	87.50	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	12/21/88	7.99	89.20	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--
	11/8/90	7.97	89.22	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	8/19/91	7.76	89.43	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	8/26/91	--	--	--	--	<100	--	--	--	--	--	--	--	--	--	--
	11/26/91	7.90	89.29	--	ND	<100	ND	ND	ND	ND	--	--	--	--	--	--
	2/27/92	7.72	89.47	--	ND	<100	ND	ND	ND	ND	--	--	--	--	--	--
	5/19/92	7.51	89.68	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	9/20/92	7.71	89.48	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	12/10/92	7.85	89.34	--	ND	--	0.50	2.4	0.50	3.7	--	--	--	--	--	--
	1/28/93	7.48	89.71	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	4/13/93	7.23	89.96	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	10/6/93	7.54	89.65	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	12/21/93	7.58	89.61	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/22/94	7.35	89.84	--	ND	--	0.7	ND	ND	ND	ND	--	--	--	--	--
	6/18/94	7.32	89.87	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/26/94	7.38	89.81	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
B-2 continued	11/19/94	7.57	89.62	--	ND,	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/15/95	6.82	90.37	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/95	7.03	90.16	--	ND	--	ND	ND	ND	ND	1.2	--	--	--	--	--
	9/13/95	7.07	90.12	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/21/95	7.27	89.92	--	ND	--	0.70	1.0	ND	ND	ND	--	--	--	--	--
	2/19/96	7.27	89.92	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/96	7.18	90.01	--	ND	--	3.2	3.8	0.70	2.9	ND	--	--	--	--	--
	9/30/96	7.16	90.03	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/14/96	7.30	89.89	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/27/97	7.11	90.08	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	5/12/97	7.11	90.08	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	8/14/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/17/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/3/98	6.78	90.41	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	8/7/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/26/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/99	6.98	90.21	--	<500	--	2.4	3.4	1.5	12	<10	--	--	--	--	--
	7/21/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/2/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/00	6.85	90.34	--	<500	--	<0.50	<0.50	<0.50	<1.5	<1.0	--	--	--	--	--
	7/11/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/6/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/18/01	7.13	90.06	--	<500	--	<0.50	<0.50	<0.50	1.7	--	<1.0	<5.0	<5.0	<5.0	<50
	7/9/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/01	6.80	90.39	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	1/28/02	6.85	90.34	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/21/02	6.68	90.15	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25
	7/25/02	6.63	90.56	--	--	--	--	--	--	--	--	--	--	--	--	--
29.24	11/20/02	6.56	22.68	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	1/13/03	6.82	22.42	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/2/03	6.46	22.78	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	7/2/03	6.65	22.59	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/22/03	6.57	22.67	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
B-2	1/30/04	6.50	22.74	--	--	--	--	--	--	--	--	--	--	--	--	--
continued	4/22/04	6.37	22.87	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25
B-3	7/31/87	5.14	94.03	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
99.17	12/21/88	5.36	93.81	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--
	11/8/90	6.03	93.14	--	ND	--	0.70	ND	ND	ND	--	--	--	--	--	--
	8/19/91	5.09	94.08	--	130	--	6.6	5.7	12	32	--	--	--	--	--	--
	8/26/91	--	--	--	--	<100	--	--	--	--	--	--	--	--	--	--
	11/26/91	5.30	93.87	--	ND	<100	ND	ND	ND	ND	ND	--	--	--	--	--
	2/27/92	5.22	93.95	--	ND	<100	1.0	ND	ND	ND	--	--	--	--	--	--
	5/19/92	4.96	94.21	--	ND	--	2.4	ND	0.70	4.1	--	--	--	--	--	--
	9/20/92	5.16	94.01	--	ND	--	34	6.0	19	25	--	--	--	--	--	--
	12/10/92	5.37	93.80	--	ND	--	--	1.2	ND	1.7	--	--	--	--	--	--
	1/28/93	4.94	94.23	--	ND	--	1.0	0.5	ND	1.0	--	--	--	--	--	--
	4/13/93	4.69	94.48	--	ND	--	0.9	ND	ND	ND	ND	--	--	--	--	--
	10/6/93	8.71	90.46	--	ND	--	6.73	ND	2.64	4.24	ND	--	--	--	--	--
	12/21/93	4.73	94.44	--	ND	--	0.6	ND	ND	ND	ND	--	--	--	--	--
	3/22/94	4.61	94.56	--	ND	--	5.6	1.0	1.2	5.5	ND	--	--	--	--	--
	6/18/94	4.49	94.68	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/26/94	4.53	94.64	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/19/94	4.78	94.39	--	ND	--	0.50	ND	1.0	1.7	ND	--	--	--	--	--
	3/15/95	4.10	95.07	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/95	4.11	95.06	--	ND	--	18	31	30	89	1.3	--	--	--	--	--
	9/13/95	4.08	95.09	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/21/95	4.29	94.88	--	ND	--	1.0	5.5	15	7.0	ND	--	--	--	--	--
	2/19/96	4.36	94.81	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/96	4.23	94.94	--	ND	--	1.3	0.7	1.8	3.6	ND	--	--	--	--	--
	9/30/96	4.29	94.88	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/14/96	4.49	94.68	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/27/97	4.17	95.00	--	ND	--	0.83	0.60	1.4	3.9	ND	--	--	--	--	--
	5/12/97	4.05	95.12	--	ND	--	12	4.1	17	36	ND	--	--	--	--	--
	8/14/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/17/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/3/98	3.82	95.35	--	ND	--	9.2	ND	ND	ND	ND	--	--	--	--	--
	8/7/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	Ethyl- Total											
					TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	benzene [2] µg/l (ppb)	Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
B-3 continued	1/26/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/99	4.04	95.13	--	<500	--	<0.50	<0.50	<0.50	<1.5	<10	--	--	--	--	--
	7/21/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/2/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/00	3.92	95.25	--	660	--	31	4.7	41	93	7.2	--	--	--	--	--
	7/11/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/6/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/18/01	3.69	95.48	--	2500	--	130	21	310	190	--	3.6	<5.0	<5.0	<5.0	<50
	7/9/01	3.58	95.59	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/01	3.70	95.47	--	860	--	36	<5.0	99	78	--	1.3	<2.0	<2.0	<2.0	<25
	1/28/02	3.91	95.26	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/21/02	3.79	95.38	--	<500	--	1.2	<0.50	1.7	2.7	--	<1.0	<5.0	<5.0	<5.0	<25
	7/25/02	3.68	95.49	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/20/02	3.72	26.55	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	1/13/03	3.77	26.50	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/2/03	3.45	26.82	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	7/2/03	3.45	26.82	--	--	--	--	--	--	--	--	--	--	--	--	--
30.27	10/22/03	3.49	26.78	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25
	1/30/04	3.54	26.73	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/22/04	3.34	26.93	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25
B-4 96.96	7/31/87	8.85	88.11	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	12/21/88	9.31	87.65	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	11/8/90	9.06	87.90	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	8/19/91	8.85	88.11	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	8/26/91	--	--	--	--	<100	--	--	--	--	--	--	--	--	--	--
	11/26/91	9.10	87.86	--	ND	<100	ND	ND	ND	ND	--	--	--	--	--	--
	2/27/92	9.02	87.94	--	ND	<100	ND	ND	ND	ND	--	--	--	--	--	--
	5/19/92	8.75	88.21	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	9/20/92	8.81	88.15	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	12/10/92	9.17	87.79	--	ND	--	0.60	1.6	0.40	2.9	--	--	--	--	--	--
	1/28/93	7.52	89.44	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	4/13/93	8.48	88.48	--	ND	--	--	0.8	0.6	2.3	ND	--	--	--	--	--
	10/6/93	8.62	88.34	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	12/21/93	8.89	88.07	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater	LPH	Ethyl- Total												DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
			Elevation ** (feet)*	Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	benzene [2] µg/l (ppb)	Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)								
B-4 continued	3/22/94	8.77	88.19	--	ND	--	ND	ND	ND	ND	3.7	--	--	--	--	--	--			
	6/18/94	8.61	88.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	9/26/94	8.48	88.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	11/19/94	8.90	88.06	--	ND	--	ND	ND	ND	ND	2.3	--	--	--	--	--	--			
	3/15/95	7.94	89.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	6/16/95	8.18	88.78	--	ND	--	ND	ND	ND	ND	2.3	--	--	--	--	--	--			
	9/13/95	8.12	88.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	11/21/95	8.31	88.65	--	ND	--	ND	0.50	0.90	ND	ND	--	--	--	--	--	--			
	2/19/96	8.43	88.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	6/11/96	8.26	88.70	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--	--			
	9/30/96	8.13	88.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	11/14/96	8.33	88.63	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--	--			
	3/27/97	8.20	88.76	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--	--			
	5/12/97	8.11	88.85	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--	--			
	8/14/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	11/5/97	8.09	88.87	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--	--			
	3/17/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	6/3/98	7.91	89.05	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--	--			
	8/7/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	11/10/98	8.11	88.85	--	ND	--	0.79	ND	ND	ND	10	--	--	--	--	--	--			
	1/26/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	4/7/99	8.44	88.52	--	<500	--	<0.50	<0.50	<0.50	<1.5	11	--	--	--	--	--	--			
	7/21/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	10/19/99	8.95	88.01	--	<500	--	<0.50	<0.50	<0.50	<1.5	64	--	--	--	--	--	--			
	2/2/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	4/13/00	8.07	88.89	--	<500	--	<0.50	<0.50	<0.50	<1.5	47	--	--	--	--	--	--			
	7/11/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	10/18/00	8.01	88.95	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	200	<5.0	<5.0	<5.0	<50	--			
	2/6/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	5/18/01	8.07	88.89	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	100	<5.0	<5.0	<5.0	<50	--			
	7/9/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	10/18/01	7.93	89.03	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	170	<2.0	3.7	<2.0	<25	--			
	1/28/02	8.28	88.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	5/21/02	7.91	89.05	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	140	<5.0	<5.0	<5.0	<25	--			
	7/25/02	7.70	89.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	29.00	11/20/02	7.66	21.34	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	360	<2.0	14	<2.0	34	--		
	1/13/03	8.90	20.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--			

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	Chemical Analysis Results											
					TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
B-4	4/2/03	7.55	21.45	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	120	<2.0	4.4	<2.0	<25
continued	7/2/03	7.61	21.39	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/22/03	7.54	21.46	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	92	<5.0	<5.0	<5.0	<25
	1/30/04	7.79	21.21	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/22/04	7.5	21.5	--	510	--	<5.0	<5.0	<5.0	<15	--	1700	<50	95	<50	<250
B-5	7/31/87	--	--	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
99.26	12/21/88	5.34	93.92	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--
	11/8/90	5.32	93.94	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	8/19/91	5.11	94.15	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	8/26/91	--	--	--	--	<100	--	--	--	--	--	--	--	--	--	--
	11/26/91	5.30	93.96	--	ND	<100	ND	ND	ND	ND	--	--	--	--	--	--
	2/27/92	5.20	94.06	--	ND	<100	ND	ND	ND	ND	--	--	--	--	--	--
	5/19/92	5.00	94.26	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	9/20/92	5.20	94.06	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	12/10/92	5.37	93.89	--	ND	--	ND	0.60	ND	1.0	--	--	--	--	--	--
	1/28/93	4.92	94.34	--	ND	--	ND	0.50	ND	ND	--	--	--	--	--	--
	4/13/93	4.70	94.56	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	10/6/93	4.64	94.62	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	12/21/93	4.64	94.62	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/22/94	4.51	94.75	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	6/18/94	4.43	94.83	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/26/94	4.49	94.77	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/19/94	4.75	94.51	--	ND	--	ND	0.90	ND	ND	ND	--	--	--	--	--
	3/15/95	4.90	94.36	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/95	4.06	95.20	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	9/13/95	4.40	94.86	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/21/95	4.38	94.88	--	ND	--	ND	1.4	0.90	ND	ND	--	--	--	--	--
	2/19/96	4.72	94.54	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/96	4.28	94.98	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	9/30/96	4.29	94.97	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/14/96	4.71	94.55	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/27/97	4.08	95.18	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	5/12/97	4.17	95.09	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	8/14/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/17/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
B-5 continued 31.20	6/3/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/7/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/26/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/21/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/2/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/11/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/6/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/18/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/9/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/01	3.64	95.62	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	1/28/02	3.88	95.38	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/21/02	3.81	95.45	--	<500	--	<0.50	<0.50	0.72	3.6	--	<1.0	<5.0	<5.0	<5.0	<25
	7/25/02	3.64	95.62	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/20/02	3.87	27.33	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/13/03	3.68	27.52	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/2/03	3.75	27.45	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/2/03	3.80	27.40	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/22/03	3.41	27.79	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/30/04	4.72	26.48	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/22/04	3.55	27.65	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25
B-6 96.90	7/31/87	7.53	89.37	--	ND	--	ND	ND	1.8	ND	--	--	--	--	--	--
	12/21/88	8.44	88.46	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/8/90	8.44	88.46	--	ND	--	1.8	ND	0.90	1.7	--	--	--	--	--	--
	8/19/91	8.52	88.38	--	ND	--	18	ND	0.50	0.90	--	--	--	--	--	--
	8/26/91	--	--	--	--	<100	--	--	--	--	--	--	--	--	--	--
	11/26/91	8.80	88.10	--	310	<100	110	ND	2.0	0.70	--	--	--	--	--	--
	2/27/92	8.45	88.45	--	ND	<100	ND	ND	ND	ND	--	--	--	--	--	--
	5/19/92	8.46	88.44	--	ND	--	9.9	ND	ND	ND	--	--	--	--	--	--
	9/20/92	8.51	88.39	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	12/10/92	8.45	88.45	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	1/28/93	7.40	89.50	--	ND	--	0.70	2.3	ND	ND	--	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
B-6 continued	4/13/93	8.38	88.52	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	10/6/93	8.35	88.55	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	12/21/93	8.43	88.47	--	ND	--	ND	ND	ND	ND	19	--	--	--	--	--
	3/22/94	8.43	88.47	--	ND	--	ND	ND	ND	ND	7.1	--	--	--	--	--
	6/18/94	8.43	88.47	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/26/94	8.43	88.47	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/19/94	8.44	88.46	--	ND	--	ND	ND	ND	ND	5.8	--	--	--	--	--
	3/15/95	8.42	88.48	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/95	8.41	88.49	--	ND	--	ND	ND	ND	ND	4.4	--	--	--	--	--
	9/13/95	8.42	88.48	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/21/95	8.41	88.49	--	ND	--	0.70	3.0	1.8	ND	ND	--	--	--	--	--
	2/19/96	8.42	88.48	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/96	8.40	88.50	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	9/30/96	8.43	88.47	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/14/96	8.44	88.46	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/28/97	8.44	88.46	--	ND	--	ND	ND	ND	ND	12	--	--	--	--	--
	5/12/97	8.43	88.47	--	ND	--	ND	ND	ND	ND	12	--	--	--	--	--
	8/14/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/97	8.44	88.46	--	860	--	ND	0.80	ND	ND	ND	--	--	--	--	--
	3/17/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/3/98	8.43	88.47	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	8/7/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/98	8.45	88.45	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	1/26/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/99	8.43	88.47	--	<500	--	<0.50	<0.50	<0.50	<1.5	<10	--	--	--	--	--
	7/21/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/99	8.45	88.45	--	<500	--	<0.50	<0.50	<0.50	<1.5	<10	--	--	--	--	--
	2/2/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/00	8.47	88.43	--	<500	--	<0.50	<0.50	<0.50	<1.5	2.8	--	--	--	--	--
	7/11/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/00	8.46	88.44	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	2.3	<5.0	<5.0	<5.0	<50
	2/6/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/18/01	8.39	88.51	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	1.5	<5.0	<5.0	<5.0	<50
	7/9/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/01	8.45	88.45	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	1/28/02	8.45	88.45	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
B-6	5/21/02	8.44	88.46	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	1.8	<5.0	<5.0	<5.0	<25
continued	7/25/02	8.45	88.45	--	--	--	--	--	--	--	--	--	--	--	--	--
28.95	11/20/02	8.49	20.46	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	19	<2.0	<2.0	<2.0	<25
	1/13/03	8.48	20.47	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/2/03	5.27	23.68	--	<500	--	4.1	<0.50	10	<1.5	--	640	<40	<40	<40	<500
	7/2/03	8.45	20.50	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/22/03	8.50	20.45	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	75	<5.0	<5.0	<5.0	96
	1/30/04	8.43	20.52	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/22/04	8.42	20.53	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	47	<5.0	<5.0	<5.0	92
B-7	11/8/90	10.29	87.07	--	2600	--	250	ND	66	ND	--	--	--	--	--	--
97.36	8/19/91	10.18	87.18	--	1600	<100	860	1.3	17	16	--	--	--	--	--	--
	8/26/91	--	--	--	--	270	--	--	--	--	--	--	--	--	--	--
	11/26/91	10.30	87.06	--	2500	--	550	0.70	4.0	8.4	--	--	--	--	--	--
	2/27/92	10.20	87.16	--	1600	<100	440	0.90	4.7	5.1	--	--	--	--	--	--
	5/19/92	10.03	87.33	--	3200	--	520	1.2	5.4	6.4	--	--	--	--	--	--
	9/20/92	10.14	87.22	--	1000	--	350	0.50	2.5	ND	--	--	--	--	--	--
	12/10/92	10.24	87.12	--	700	--	220	1.1	0.90	1.9	--	--	--	--	--	--
	1/28/93	9.80	87.56	--	1900	--	970	2.2	22	4.8	--	--	--	--	--	--
	4/13/93	9.95	87.41	--	2800	--	340	4.4	4.5	9.3	2100	--	--	--	--	--
	10/6/93	10.02	87.34	--	2440	--	577	0.87	6.62	8.88	198	--	--	--	--	--
	12/21/93	10.10	87.26	--	870	--	250	1.0	3.1	3.8	3200	--	--	--	--	--
	3/22/94	10.00	87.36	--	1500	--	180	2.6	3.6	6.9	3200	--	--	--	--	--
	6/18/94	9.95	87.41	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/26/94	9.93	87.43	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/19/94	10.13	87.23	--	7800	--	650	1.1	0.50	3.7	20000	--	--	--	--	--
	3/15/95	9.42	87.94	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/95	9.70	87.66	--	14000	--	1600	2.4	8.3	16	28000	--	--	--	--	--
	9/13/95	9.69	87.67	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/21/95	9.84	87.52	--	30890	--	1040	2.0	1.0	13	23000	--	--	--	--	--
	2/19/96	9.72	87.64	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/96	9.82	87.54	--	26100	--	1080	6.0	12	20	19100	--	--	--	--	--
	9/30/96	8.59	88.77	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/14/96	9.79	87.57	--	1700	--	690	ND	12	11	19000	--	--	--	--	--
	3/28/97	9.77	87.59	--	2000	--	640	ND	13	20	14000	--	--	--	--	--
	5/12/97	9.72	87.64	--	2100	--	480	28	38	140	13000	--	--	--	--	--
	8/14/97	9.76	87.60	--	640	--	ND	ND	3.9	ND	8800	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
B-7 continued	11/5/97	9.75	87.61	--	ND	--	ND	ND	ND	ND	670	--	--	--	--	--
	3/17/98	9.43	87.93	--	1100	--	ND	ND	11	ND	9000	--	--	--	--	--
	6/3/98	9.56	87.80	--	ND	--	ND	ND	0.59	ND	3900	--	--	--	--	--
	8/7/98	9.57	87.79	--	ND	--	ND	ND	ND	ND	810	--	--	--	--	--
	11/10/98	9.60	87.76	--	ND	--	26	ND	ND	ND	2500	--	--	--	--	--
	1/26/99	7.64	89.72	--	<500	--	170	8.8	8.9	18	3800	--	--	--	--	--
	4/7/99	9.62	87.74	--	600	--	3.1	5.2	<3.0	<6.0	8200	--	--	--	--	--
	7/21/99	9.63	87.73	--	<500	--	<0.50	<0.50	<0.50	<1.5	4800	--	--	--	--	--
	10/19/99	9.62	87.74	--	<500	--	66	<0.50	<0.50	<1.5	4400	--	--	--	--	--
	2/2/00	9.64	87.72	--	<500	--	69	<0.50	<0.50	<1.5	4000	--	--	--	--	--
	4/13/00	9.64	87.72	--	1700	--	39	<10	<10	<30	4500	5200	--	--	--	--
	7/11/00	9.58	87.78	--	<500	--	2.8	<2.5	2.9	<7.5	--	2600	<100	<100	<100	<1000
	10/18/00	9.91	87.45	--	<500	--	2.7	<1.0	<1.0	<3.0	--	1400	<63	<63	<63	<630
	2/6/01	9.55	87.81	--	<500	--	1.9	<0.50	0.72	1.8	--	3400	<63	<63	85	1200
	5/18/01	9.63	87.73	--	<500	--	<1.3	<1.3	<1.3	5.5	--	2700	<63	<63	110	<630
	7/9/01	9.48	87.88	--	<500	--	<1.2	<1.2	<1.2	<3.8	--	3100	<100	<100	100	<1000
	10/18/01	9.57	87.79	--	<500	--	30	1.2	<0.50	<1.5	--	3400	<40	<40	120	<500
	1/28/02	9.76	87.60	--	<500	--	13	1.8	<0.50	<1.5	--	2600	<80	<80	<80	<1000
	5/21/02	9.55	87.81	--	<500	--	<5.0	<5.0	<5.0	<15	--	2000	<50	<50	76	460
	7/25/02	9.45	87.91	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	1300	<40	<40	<40	<500
	11/20/02	9.36	20.04	--	<620	--	<6.2	<6.2	<6.2	<19	--	1300	<40	<40	<40	530
29.40	1/13/03	9.46	19.94	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	1600	<20	<20	36	280
	4/2/03	9.34	20.06	--	<500	--	1.6	<0.62	<0.62	<1.9	--	1400	<40	<40	<40	<500
	7/2/03	9.45	19.95	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	630	<40	<40	<40	<500
	10/22/03	9.35	20.05	--	<500	--	<2.5	<2.5	<2.5	<7.5	--	500	<25	<25	<25	<120
	1/30/04	9.50	19.90	--	<2500	--	5.8	<2.5	<2.5	<7.5	--	830	<25	<25	<25	<120
	4/22/04	9.26	20.14	--	<500	--	<5.0	<5.0	<5.0	<15	--	570	<50	<50	<50	<250
MW-1 98.14	9/20/92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/10/92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/28/93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/6/93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/21/93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/22/94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/18/94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/26/94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
MW-1 continued	11/19/94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/15/95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/13/95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/21/95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/19/96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/30/96	DRY	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/14/96	DRY	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/27/97	DRY	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/12/97	DRY	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/14/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/17/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/3/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/7/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/26/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/99	DRY	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/21/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/2/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/11/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/6/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/18/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/9/01	DRY	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/01	DRY	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/28/02	DRY	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/21/02	DRY	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/02	DRY	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--
30.16	11/20/02	DRY	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/13/03	DRY	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/2/03	DRY	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/2/03	DRY	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	Ethyl- Total											
					TPH-g [1]	TPH-d [1]	Benzene [2]	Toluene [2]	benzene [2]	Xylenes [2]	MTBE [3]	MTBE [4]	DIPE [4]	ETBE [4]	TAME [4]	TBA [4]
					µg/l (ppb)	µg/l (ppb)	µg/l (ppb)	µg/l (ppb)	µg/l (ppb)	µg/l (ppb)	µg/l (ppb)	µg/l (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)
MW-1	10/22/03	DRY	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--
continued	1/30/04	DRY	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/22/04	Dry	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	9/20/92	8.75	89.88	0.09	--	--	--	--	--	--	--	--	--	--	--	--
98.56	12/10/92	9.02	89.62	0.1	--	--	--	--	--	--	--	--	--	--	--	--
	1/28/93	9.49	89.16	0.12	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/93	8.27	90.34	0.06	--	--	--	--	--	--	--	--	--	--	--	--
	10/6/93	8.57	90.01	0.03	--	--	--	--	--	--	--	--	--	--	--	--
	12/21/93	8.78	89.93	0.2	--	--	--	--	--	--	--	--	--	--	--	--
	3/22/94	8.39	90.20	0.04	--	--	--	--	--	--	--	--	--	--	--	--
	6/18/94	8.33	90.29	0.08	--	--	--	--	--	--	--	--	--	--	--	--
	9/26/94	8.43	90.19	0.08	--	--	--	--	--	--	--	--	--	--	--	--
	11/19/94	8.65	90.00	0.12	--	--	--	--	--	--	--	--	--	--	--	--
	3/15/95	7.96	90.65	0.06	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/95	8.03	90.58	0.07	--	--	--	--	--	--	--	--	--	--	--	--
	9/13/95	8.19	90.44	0.09	--	--	--	--	--	--	--	--	--	--	--	--
	11/21/95	8.37	90.26	0.09	--	--	--	--	--	--	--	--	--	--	--	--
	2/19/96	8.37	90.24	0.06	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/96	8.21	90.40	0.07	--	--	--	--	--	--	--	--	--	--	--	--
	9/30/96	8.27	90.34	0.06	--	--	--	--	--	--	--	--	--	--	--	--
	11/14/96	8.40	90.21	0.07	--	--	--	--	--	--	--	--	--	--	--	--
	3/27/97	8.24	90.34	0.02	--	--	--	--	--	--	--	--	--	--	--	--
	5/12/97	8.27	90.32	0.04	--	--	--	--	--	--	--	--	--	--	--	--
	8/14/97	8.25	90.31	Trace	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/97	8.38	90.23	0.07	--	--	--	--	--	--	--	--	--	--	--	--
	3/17/98	7.77	90.82	0.04	--	--	--	--	--	--	--	--	--	--	--	--
	6/3/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/7/98	8.00	90.56	Sheen	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/98	8.30	90.31	0.06	--	--	--	--	--	--	--	--	--	--	--	--
	1/26/99	6.45	92.15	0.05	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/99	8.40	90.19	0.04	--	--	--	--	--	--	--	--	--	--	--	--
	7/21/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/99	7.92	90.65	0.01	--	--	--	--	--	--	--	--	--	--	--	--
	2/2/00	8.35	90.25	0.05	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/00	7.12	91.48	0.05	--	--	--	--	--	--	--	--	--	--	--	--
	7/11/00	7.95	90.64	0.04	--	--	--	--	--	--	--	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	Ethyl- Total											
					TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	benzene [2] µg/l (ppb)	Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
MW-2 continued	10/18/00	8.23	90.34	0.01	--	--	--	--	--	--	--	--	--	--	--	--
	2/6/01	8.39	90.17	Sheen	--	--	--	--	--	--	--	--	--	--	--	--
	5/18/01	8.68	89.88	Sheen	--	--	--	--	--	--	--	--	--	--	--	--
	7/9/01	8.02	90.54	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/01	8.01	90.55	Sheen	--	--	--	--	--	--	--	--	--	--	--	--
	1/28/02	8.13	90.43	Sheen	--	--	--	--	--	--	--	--	--	--	--	--
	5/21/02	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/02	7.74	90.82	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/20/02	7.70	22.81	--	1200	--	18	3.9	2.8	6.4	--	35	<10	<10	<10	<120
	1/13/03	7.97	22.54	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/2/03	7.56	22.95	--	830	--	36	<0.50	3.4	5.4	--	78	<2.0	<2.0	<2.0	39
	7/2/03	7.77	22.74	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/22/03	7.65	22.86	--	800	--	64	1.3	3.1	7.5	--	19	<10	<10	<10	<50
	1/30/04	7.89	22.62	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/22/04	7.45	23.06	--	600	--	41	<0.50	2.4	3.3	--	11	<5.0	<5.0	<5.0	<25
MW-3 97.86	9/20/92	7.95	89.98	0.09	--	--	--	--	--	--	--	--	--	--	--	--
	12/10/92	8.31	89.62	0.09	--	--	--	--	--	--	--	--	--	--	--	--
	1/28/93	7.73	90.22	0.12	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/93	7.56	90.35	0.06	--	--	--	--	--	--	--	--	--	--	--	--
	10/6/93	7.87	90.01	0.03	--	--	--	--	--	--	--	--	--	--	--	--
	12/21/93	7.95	89.99	0.1	--	--	--	--	--	--	--	--	--	--	--	--
	3/22/94	7.70	90.20	0.05	--	--	--	--	--	--	--	--	--	--	--	--
	6/18/94	7.64	90.29	0.09	--	--	--	--	--	--	--	--	--	--	--	--
	9/26/94	7.70	90.20	0.05	--	--	--	--	--	--	--	--	--	--	--	--
	11/19/94	7.93	90.01	0.11	--	--	--	--	--	--	--	--	--	--	--	--
	3/15/95	7.25	90.65	0.05	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/95	7.34	90.60	0.11	--	--	--	--	--	--	--	--	--	--	--	--
	9/13/95	7.48	90.44	0.08	--	--	--	--	--	--	--	--	--	--	--	--
	11/21/95	7.65	90.28	0.09	--	--	--	--	--	--	--	--	--	--	--	--
	2/19/96	7.66	90.25	0.06	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/96	7.50	90.41	0.06	--	--	--	--	--	--	--	--	--	--	--	--
	9/30/96	7.56	90.34	0.05	--	--	--	--	--	--	--	--	--	--	--	--
	11/14/96	7.70	90.23	0.09	--	--	--	--	--	--	--	--	--	--	--	--
	3/27/97	7.59	90.32	0.06	--	--	--	--	--	--	--	--	--	--	--	--
	5/12/97	7.56	90.33	0.04	--	--	--	--	--	--	--	--	--	--	--	--
	8/14/97	7.60	90.30	0.05	--	--	--	--	--	--	--	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
MW-3 continued	11/5/97	7.63	90.26	0.04	--	--	--	--	--	--	--	--	--	--	--	--
	3/17/98	7.05	90.83	0.03	--	--	--	--	--	--	--	--	--	--	--	--
	6/3/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/7/98	7.30	90.56	Sheen	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/98	7.58	90.33	0.06	--	--	--	--	--	--	--	--	--	--	--	--
	1/26/99	7.70	90.17	0.01	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/99	7.61	90.27	0.03	--	--	--	--	--	--	--	--	--	--	--	--
	7/21/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/99	7.22	90.65	0.01	--	--	--	--	--	--	--	--	--	--	--	--
	2/2/00	7.61	90.27	0.02	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/00	7.41	90.49	0.05	--	--	--	--	--	--	--	--	--	--	--	--
	7/11/00	7.24	90.64	0.03	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/00	7.57	90.31	0.03	--	--	--	--	--	--	--	--	--	--	--	--
	2/6/01	7.68	90.19	0.01	--	--	--	--	--	--	--	--	--	--	--	--
	5/18/01	7.97	89.89	Sheen	--	--	--	--	--	--	--	--	--	--	--	--
	7/9/01	7.11	90.75	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/01	7.31	90.55	Sheen	--	--	--	--	--	--	--	--	--	--	--	--
	1/28/02	7.43	90.43	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/21/02	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/02	7.04	90.82	--	--	--	--	--	--	--	--	--	--	--	--	--
29.91	11/20/02	7.01	22.90	--	3300	--	5.9	1.3	16	12	--	290	<40	<40	<40	<500
	1/13/03	7.26	22.65	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/2/03	6.85	23.06	--	1800	--	8.2	<1.2	3.6	6.6	--	400	<40	<40	<40	<500
	7/2/03	7.05	22.86	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/22/03	7.05	22.86	--	3100	--	11	<2.0	6.3	9.0	--	290	<20	<20	<20	290
	1/30/04	7.13	22.78	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/22/04	6.76	23.15	--	2400	--	1.6	<1.2	2.8	4.8	--	130	<12	<12	<12	<62
MW-4 97.77	9/20/92	7.85	89.97	0.07	--	--	--	--	--	--	--	--	--	--	--	--
	12/10/92	8.22	89.63	0.1	--	--	--	--	--	--	--	--	--	--	--	--
	1/28/93	7.82	90.03	0.11	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/93	7.45	90.37	0.07	--	--	--	--	--	--	--	--	--	--	--	--
	10/6/93	7.77	90.02	0.03	--	--	--	--	--	--	--	--	--	--	--	--
	12/21/93	7.83	90.00	0.08	--	--	--	--	--	--	--	--	--	--	--	--
	3/22/94	7.56	90.24	0.04	--	--	--	--	--	--	--	--	--	--	--	--
	6/18/94	7.50	90.32	0.07	--	--	--	--	--	--	--	--	--	--	--	--
	9/26/94	7.60	90.23	0.08	--	--	--	--	--	--	--	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
MW-4 continued	11/19/94	7.81	90.04	0.11	--	--	--	--	--	--	--	--	--	--	--	--
	3/15/95	7.12	90.69	0.05	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/95	8.02	90.43	0.9	--	--	--	--	--	--	--	--	--	--	--	--
	9/13/95	7.33	90.47	0.04	--	--	--	--	--	--	--	--	--	--	--	--
	11/21/95	7.48	90.32	0.04	--	--	--	--	--	--	--	--	--	--	--	--
	2/19/96	7.53	90.28	0.05	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/96	7.36	90.44	0.04	--	--	--	--	--	--	--	--	--	--	--	--
	9/30/96	7.44	90.37	0.05	--	--	--	--	--	--	--	--	--	--	--	--
	11/14/96	7.58	90.25	0.08	--	--	--	--	--	--	--	--	--	--	--	--
	3/27/97	7.46	90.34	0.04	--	--	--	--	--	--	--	--	--	--	--	--
	5/12/97	7.44	90.36	0.04	--	--	--	--	--	--	--	--	--	--	--	--
	8/14/97	7.43	90.34	Trace	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/97	7.56	90.26	0.06	--	--	--	--	--	--	--	--	--	--	--	--
	3/17/98	6.91	90.88	0.03	--	--	--	--	--	--	--	--	--	--	--	--
	6/3/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/7/98	7.17	90.60	Sheen	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/98	7.38	90.39	Sheen	--	--	--	--	--	--	--	--	--	--	--	--
	1/26/99	7.63	90.18	0.05	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/99	7.51	90.30	0.05	--	--	--	--	--	--	--	--	--	--	--	--
	7/21/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/99	7.10	90.68	0.01	--	--	--	--	--	--	--	--	--	--	--	--
	2/2/00	7.51	90.30	0.05	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/00	7.29	90.52	0.05	--	--	--	--	--	--	--	--	--	--	--	--
	7/11/00	7.11	90.68	0.03	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/00	7.42	90.36	0.01	--	--	--	--	--	--	--	--	--	--	--	--
	2/6/01	7.57	90.21	0.01	--	--	--	--	--	--	--	--	--	--	--	--
	5/18/01	7.85	89.92	Sheen	--	--	--	--	--	--	--	--	--	--	--	--
	7/9/01	8.99	88.78	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/01	7.19	90.58	Sheen	--	--	--	--	--	--	--	--	--	--	--	--
	1/28/02	7.31	90.46	Sheen	--	--	--	--	--	--	--	--	--	--	--	--
	5/21/02	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/02	6.92	90.85	--	--	--	--	--	--	--	--	--	--	--	--	--
29.78	11/20/02	6.87	22.91	--	4900	--	13	<2.5	30	12	--	850	<40	<40	<40	<500
	1/13/03	7.12	22.66	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/2/03	6.73	23.05	--	3300	--	17	<5.0	9.8	<15	--	1400	<40	<40	<40	<500
	7/2/03	6.90	22.88	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/22/03	6.90	22.88	--	4600	--	7.2	<5.0	16	<15	--	200	<50	<50	<50	<250

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
MW-4	1/30/04	6.93	22.85	--	--	--	--	--	--	--	--	--	--	--	--	--
continued	4/22/04	6.63	23.15	--	4300	--	6.7	<2.0	6.1	7.2	--	43	<20	<20	<20	<100
MW-6	8/19/91	7.11	92.17	--	ND	--	1.1	ND	ND	0.8	--	--	--	--	--	--
99.28	8/26/94	--	--	--	--	<100	--	--	--	--	--	--	--	--	--	--
	11/26/91	6.63	92.65	--	ND	--	3.1	1.6	ND	3.5	--	--	--	--	--	--
	2/27/92	6.53	92.75	--	ND	<100	2.1	1.6	ND	4.6	--	--	--	--	--	--
	5/19/92	6.26	93.02	--	190	--	1.1	ND	ND	12	--	--	--	--	--	--
	9/20/92	7.01	92.28	0.01	--	--	--	--	--	--	--	--	--	--	--	--
	12/10/92	6.65	92.64	0.01	--	--	--	--	--	--	--	--	--	--	--	--
	1/28/93	6.89	92.39	0.01	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/93	6.48	92.81	0.01	--	--	--	--	--	--	--	--	--	--	--	--
	10/6/93	8.51	91.52	1	--	--	--	--	--	--	--	--	--	--	--	--
	12/21/93	7.29	92.55	0.74	--	--	--	--	--	--	--	--	--	--	--	--
	3/22/94	6.77	92.91	0.53	--	--	--	--	--	--	--	--	--	--	--	--
	6/18/94	6.95	92.97	0.85	--	--	--	--	--	--	--	--	--	--	--	--
	9/26/94	7.25	92.87	1.12	--	--	--	--	--	--	--	--	--	--	--	--
	11/19/94	7.15	92.63	0.67	--	--	--	--	--	--	--	--	--	--	--	--
	3/15/95	6.25	93.48	0.6	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/95	6.15	93.46	0.44	--	--	--	--	--	--	--	--	--	--	--	--
	9/13/95	5.91	93.48	0.14	--	--	--	--	--	--	--	--	--	--	--	--
	11/21/95	6.11	93.27	0.13	--	--	--	--	--	--	--	--	--	--	--	--
	2/19/96	6.10	93.24	0.08	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/96	6.00	93.37	0.12	--	--	--	--	--	--	--	--	--	--	--	--
	9/30/96	6.09	93.33	0.18	--	--	--	--	--	--	--	--	--	--	--	--
	11/14/96	6.53	93.07	0.43	--	--	--	--	--	--	--	--	--	--	--	--
	3/27/97	6.00	93.43	0.2	--	--	--	--	--	--	--	--	--	--	--	--
	5/12/97	6.97	92.44	0.17	--	--	--	--	--	--	--	--	--	--	--	--
	8/14/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/17/98	5.90	93.46	0.11	--	--	--	--	--	--	--	--	--	--	--	--
	6/3/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/7/98	6.99	92.29	Sheen	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/26/99	7.20	92.09	0.01	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/21/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
MW-6 continued	10/19/99	8.10	91.18	Sheen	--	--	--	--	--	--	--	--	--	--	--	--
	2/2/00	6.84	92.46	0.02	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/00	6.73	92.56	0.01	--	--	--	--	--	--	--	--	--	--	--	--
	7/11/00	5.62	93.67	0.01	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/00	6.53	92.75	Sheen	--	--	--	--	--	--	--	--	--	--	--	--
	2/6/01	7.17	92.12	0.01	--	--	--	--	--	--	--	--	--	--	--	--
	5/18/01	6.23	93.05	Sheen	--	--	--	--	--	--	--	--	--	--	--	--
	7/9/01	6.00	93.28	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/01	5.53	93.75	Sheen	--	--	--	--	--	--	--	--	--	--	--	--
	1/28/02	5.71	93.57	Sheen	--	--	--	--	--	--	--	--	--	--	--	--
	5/21/02	NS	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/25/02	5.57	93.71	--	--	--	--	--	--	--	--	--	--	--	--	--
	31.52 11/20/02	5.57	25.95	--	1000	--	270	<5.0	<5.0	<15	--	33	<2.0	<2.0	<2.0	<25
	1/13/03	5.66	25.86	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/2/03	5.27	26.25	--	22000	--	720	330	890	4900	--	250	<100	<100	<100	<1200
	7/2/03	5.42	26.10	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/22/03	Skimmer in Well			--	--	--	--	--	--	--	--	--	--	--	--
	1/30/04	Pump in Well			--	--	--	--	--	--	--	--	--	--	--	--
	4/22/04	Inaccessible			--	--	--	--	--	--	--	--	--	--	--	--
MW-7 97.75	8/19/91	7.92	89.83	--	ND	--	1.3	ND	ND	ND	--	--	--	--	--	--
	8/26/91	--	--	--	--	<100	--	--	--	--	--	--	--	--	--	--
	11/26/91	8.20	89.55	--	ND	--	0.90	ND	ND	ND	--	--	--	--	--	--
	2/27/92	8.17	89.58	--	270	<100	65	18	17	14	--	--	--	--	--	--
	5/19/92	7.72	90.03	--	ND	--	0.90	ND	ND	ND	--	--	--	--	--	--
	9/20/92	7.79	89.96	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	12/10/92	8.40	89.35	--	ND	--	ND	0.60	ND	1.3	--	--	--	--	--	--
	1/28/93	7.82	89.93	--	140	--	27	26	2.9	24	--	--	--	--	--	--
	4/13/93	7.90	89.85	--	200	--	31	22	6.4	19	ND	--	--	--	--	--
	10/6/93	7.59	90.16	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	12/21/93	7.97	89.78	--	ND	--	6.7	1.1	1.1	3.0	ND	--	--	--	--	--
	3/22/94	7.75	90.00	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	6/18/94	7.43	90.32	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/26/94	7.34	90.41	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/19/94	7.98	89.77	--	ND	--	13	1.4	2.4	6.1	40	--	--	--	--	--
	3/15/95	6.88	90.87	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/95	6.99	90.76	--	980	--	58	2.0	4.0	8.2	160	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
MW-7 continued	9/13/95	6.91	90.84	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/21/95	7.18	90.57	--	ND	--	10	4.0	3.5	ND	ND	--	--	--	--	--
	2/19/96	7.34	90.41	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/96	7.05	90.70	--	760	--	2.6	1.5	ND	1.7	550	--	--	--	--	--
	9/30/96	6.97	90.78	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/14/96	7.28	90.47	--	ND	--	36	24	4.0	18	230	--	--	--	--	--
	3/27/97	7.17	90.58	--	ND	--	9.8	6.4	1.2	5.8	400	--	--	--	--	--
	5/12/97	7.04	90.71	--	ND	--	1.3	ND	ND	ND	330	--	--	--	--	--
	8/14/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/97	7.46	90.29	--	1200	--	320	120	25	110	1900	--	--	--	--	--
	3/17/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/3/98	6.69	91.06	--	ND	--	12	4.0	0.55	6.4	1100	--	--	--	--	--
	8/7/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/98	7.00	90.75	--	ND	--	9.2	2.9	1.5	93	3900	--	--	--	--	--
	1/26/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/99	7.61	90.14	--	650	--	90	27	16	53	6000	--	--	--	--	--
	7/21/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/99	6.69	91.06	--	<500	--	<0.50	<0.50	<0.50	<1.5	870	--	--	--	--	--
	2/2/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/00	6.90	90.85	--	1000	--	21	<5.0	<5.0	<15	2900	--	--	--	--	--
	7/11/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/00	6.76	90.99	--	<500	--	<5.0	<5.0	<5.0	<15	--	5700	<100	<100	<100	<1000
	2/6/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/18/01	6.78	90.97	--	<500	--	3.8	<1.0	<1.0	<3.0	--	2400	<100	<100	<100	<1000
	7/9/01	6.50	91.25	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/01	6.65	91.10	--	<500	--	3.6	<0.50	<0.50	<1.5	--	1100	<20	24	<20	<250
	1/28/02	7.29	90.46	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/21/02	6.67	91.08	--	630	--	<5.0	<5.0	<5.0	<15	--	4900	<50	140	<50	460
	7/25/02	6.41	91.34	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/20/02	6.51	23.29	--	<500	--	4.0	<.62	<.62	<1.9	--	1200	<100	<100	<100	<1200
	1/13/03	6.84	22.96	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/2/03	6.45	23.35	--	<500	--	0.94	<0.50	<0.50	<1.5	--	560	<2.0	20	6.3	84
	7/2/03	6.72	23.08	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/22/03	6.25	23.55	--	<500	--	<5.0	<5.0	<5.0	<15	--	8300	<50	440	91	2300
	1/30/04	6.78	23.02	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/22/04	6.14	23.66	--	<500	--	8.8	<5.0	<5.0	<15	--	950	<50	<50	<50	<250

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
MW-8 97.18	8/19/91	10.88	86.30	--	2800	--	1000	270	51	220	--	--	--	--	--	--
	8/26/91	--	--	--	--	510	--	--	--	--	--	--	--	--	--	--
	11/26/91	11.00	86.18	--	6300	<100	2000	15	ND	29	--	--	--	--	--	--
	2/27/92	10.92	86.26	--	5500	<100	2200	56	26	110	--	--	--	--	--	--
	5/19/92	10.80	86.38	--	7800	<100	2600	25	19	61	--	--	--	--	--	--
	9/20/92	10.84	86.34	--	2400	--	890	14	22	77	--	--	--	--	--	--
	12/10/92	10.91	86.27	--	2100	<500	81	6.5	1.2	21	--	--	--	--	--	--
	1/28/93	10.58	86.60	--	1900	--	190	32	26	81	--	--	--	--	--	--
	4/13/93	10.70	86.48	--	3500	--	43	6.6	12	33	2200	--	--	--	--	--
	10/6/93	10.79	86.39	--	3540	--	200	2.31	20.6	53.4	162	--	--	--	--	--
	12/21/93	10.80	86.38	--	1200	--	150	2.2	9.8	26	3100	--	--	--	--	--
	3/22/94	10.77	86.41	--	2000	--	150	2.5	12	41	4100	--	--	--	--	--
	6/18/94	10.70	86.48	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/26/94	10.69	86.49	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/19/94	10.86	86.32	--	13000	--	870	2.1	5.6	9.4	36000	--	--	--	--	--
	3/15/95	10.31	86.87	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/95	10.51	86.67	--	16000	--	630	3.7	9.3	26	25000	--	--	--	--	--
	9/13/95	10.53	86.65	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/21/95	10.65	86.53	--	158000	--	320	2.0	13	ND	10000	--	--	--	--	--
	2/19/96	10.67	86.51	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/96	10.64	86.54	--	16000	--	360	6.0	5.0	32	11800	--	--	--	--	--
	9/30/96	10.53	86.65	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/14/96	10.67	86.51	--	1500	--	120	ND	ND	23	9300	--	--	--	--	--
	3/28/97	10.65	86.53	--	990	--	47	ND	3.7	8.6	6300	--	--	--	--	--
	5/12/97	10.55	86.63	--	1100	--	82	1.7	2.3	7.4	9400	--	--	--	--	--
	8/14/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/97	10.57	86.61	--	3300	--	680	17	27	180	1900	--	--	--	--	--
	3/17/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/3/98	10.45	86.73	--	1900	--	220	6.2	23	35	3400	--	--	--	--	--
	8/7/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/98	10.48	86.70	--	3900	--	670	15	37	87	1700	--	--	--	--	--
	1/26/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/99	10.57	86.61	--	5400	--	140	<6.0	10	18	6300	--	--	--	--	--
	7/21/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/99	10.49	86.69	--	1500	--	170	5.7	6.5	19	1200	--	--	--	--	--
	2/2/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/00	10.53	86.65	--	2500	--	34	<10	<10	<30	4500	3400	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
MW-8 continued	7/11/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/00	10.45	86.73	--	1400	--	210	<10	12	33	--	1100	<100	<100	<100	<1000
	2/6/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/18/01	10.43	86.75	--	590	--	15	<2.5	41	14	--	3200	<100	<100	<100	<1000
	7/9/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/01	10.39	86.79	--	1500	--	160	4.9	13	31	--	770	<40	<40	<40	<500
	1/28/02	10.55	86.63	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/21/02	10.42	86.76	--	<500	--	<5.0	<5.0	<5.0	<15	--	1100	<50	<50	<50	320
	7/25/02	10.31	86.87	--	--	--	--	--	--	--	--	--	--	--	--	--
29.24	11/20/02	10.24	19.00	--	730	--	7.2	6.2	0.64	4.8	--	620	<20	<20	<20	<250
	1/13/03	10.41	18.83	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/2/03	10.23	19.01	--	<500	--	9.5	<0.50	1.7	4.0	--	810	<20	<20	<20	290
	7/2/03	10.30	18.94	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/22/03	10.15	19.09	--	1200	--	89	3.4	2.6	22	--	290	<20	<20	<20	<100
	1/30/04	10.35	18.89	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/22/04	10.12	19.12	--	<500	--	<2.0	<2.0	<2.0	<6.0	--	290	<20	<20	<20	<100
MW-9 97.78	8/19/91	10.96	86.82	--	370	--	10	0.70	ND	130	--	--	--	--	--	--
	8/26/91	--	--	--	--	<100	--	--	--	--	--	--	--	--	--	--
	11/26/91	11.10	86.68	--	1600	<100	2.6	ND	0.40	200	--	--	--	--	--	--
	2/27/92	10.93	86.85	--	3100	<100	780	590	74	590	--	--	--	--	--	--
	5/19/92	10.85	86.93	--	12000	<100	2200	2900	420	2600	--	--	--	--	--	--
	9/20/92	10.91	86.87	--	7400	--	1500	440	480	2300	--	--	--	--	--	--
	12/10/92	10.95	86.83	--	5200	<500	1100	140	89	1200	--	--	--	--	--	--
	1/28/93	10.60	87.18	--	7300	--	1000	1200	350	1400	--	--	--	--	--	--
	4/13/93	10.70	87.08	--	33000	--	4600	7400	1300	5100	ND	--	--	--	--	--
	10/6/93	10.82	86.96	--	10700	--	3680	359	808	2380	52.9	--	--	--	--	--
	12/21/93	10.88	86.90	--	8800	--	3200	190	560	1800	130	--	--	--	--	--
	3/22/94	10.76	87.02	--	6000	--	170	79	110	130	ND	--	--	--	--	--
	6/18/94	10.76	87.02	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/26/94	10.80	86.98	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/19/94	10.92	86.86	--	6500	--	2900	77	20	370	ND	--	--	--	--	--
	3/15/95	10.34	87.44	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/95	10.54	87.24	--	13000	--	3800	30	590	2400	ND	--	--	--	--	--
	9/13/95	10.63	87.15	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/21/95	10.71	87.07	--	8870	--	2200	15	500	3.0	ND	--	--	--	--	--
	2/19/96	10.78	87.00	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
MW-9 continued	6/11/96	10.70	87.08	--	5800	--	250	16	67	220	100	--	--	--	--	--
	9/30/96	10.66	87.12	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/14/96	10.79	86.99	--	2900	--	1100	11	37	66	ND	--	--	--	--	--
	3/27/97	10.70	87.08	--	3000	--	1100	12	40	640	ND	--	--	--	--	--
	5/12/97	10.72	87.06	--	3100	--	1300	41	40	570	ND	--	--	--	--	--
	8/14/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/97	10.65	87.13	--	5100	--	1700	45	94	340	80	--	--	--	--	--
	3/17/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/3/98	10.49	87.29	--	8300	--	1900	26	180	1200	ND	--	--	--	--	--
	8/7/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/98	10.56	87.22	--	3300	--	1100	27	49	88	ND	--	--	--	--	--
	1/26/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/99	10.62	87.16	--	3000	--	840	6.9	14	21	420	--	--	--	--	--
	7/21/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/99	10.60	87.18	--	2300	--	800	17	68	61	<200	--	--	--	--	--
	2/2/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/00	10.60	87.18	--	850	--	430	<5.0	12	<15	<10	--	--	--	--	--
	7/11/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/00	10.58	87.20	--	2100	--	970	14	100	64	--	3.5	<10	<10	<10	<100
	2/6/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/18/01	10.50	87.28	--	<500	--	70	1.2	9.3	7.0	--	7.2	<5.0	<5.0	<5.0	<50
	7/9/01	10.41	87.37	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/01	10.49	87.29	--	1700	--	510	12	120	56	--	4.3	<2.0	<2.0	<2.0	<25
	1/28/02	10.65	87.13	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/21/02	10.55	87.23	--	<500	--	12	<0.50	3.6	1.8	--	7.0	<5.0	<5.0	<5.0	<25
	7/25/02	10.52	87.26	--	--	--	--	--	--	--	--	--	--	--	--	--
29.83	11/20/02	10.38	19.45	--	1400	--	460	9.8	59	44	--	5.3	<2.0	<2.0	<2.0	<25
	1/13/03	10.54	19.29	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/2/03	10.34	19.49	--	<500	--	18	1.3	6.0	5.3	--	13	<2.0	<2.0	<2.0	<25
	7/2/03	9.96	19.87	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/22/03	10.35	19.48	--	1400	--	360	12	62	52	--	8.4	<10	<10	<10	<50
	1/30/04	10.45	19.38	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/22/04	10.25	19.58	--	<500	--	28	1.1	8.7	6.5	--	16	<5.0	<5.0	<5.0	<25
MW-10	12/10/92	13.31	85.48	--	ND	--	1.5	2.6	1.2	6.1	--	--	--	--	--	--
98.79	1/28/93	12.08	86.71	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	4/13/93	12.25	86.54	--	ND	--	ND	0.70	0.40	1.4	ND	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	Ethyl- Total											
					TPH-g [1]	TPH-d [1]	Benzene [2]	Toluene [2]	benzene [2]	Xylenes [2]	MTBE [3]	MTBE [4]	DIPE [4]	ETBE [4]	TAME [4]	TBA [4]
					µg/l (ppb)	µg/l (ppb)	µg/l (ppb)	µg/l (ppb)	µg/l (ppb)	µg/l (ppb)	µg/l (ppb)	µg/l (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)
MW-10 continued	10/6/93	12.34	86.45	--	ND	--	6.21	1.83	2.81	10.1	ND	--	--	--	--	--
	12/21/93	12.37	86.42	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/22/94	12.39	86.40	--	ND	--	2.3	ND	ND	ND	ND	--	--	--	--	--
	6/18/94	12.28	86.51	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/26/94	12.20	86.59	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/19/94	12.39	86.40	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/15/95	11.78	87.01	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/95	12.01	86.78	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	9/13/95	11.96	86.83	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/21/95	12.10	86.69	--	ND	--	ND	ND	0.90	ND	ND	--	--	--	--	--
	2/19/96	12.17	86.62	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/11/96	12.15	86.64	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	9/30/96	12.02	86.77	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/14/96	12.21	86.58	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/28/97	12.19	86.60	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	5/12/97	12.03	86.76	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	8/14/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/97	11.63	87.16	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/17/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/3/98	11.90	86.89	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	8/7/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/98	11.85	86.94	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	1/26/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/99	11.97	86.82	--	<500	--	35	<3.0	<3.0	<6.0	<100	--	--	--	--	--
	7/21/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/99	11.95	86.84	--	<500	--	<0.50	<0.50	<0.50	<1.5	<10	--	--	--	--	--
	2/2/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/00	12.00	86.79	--	<500	--	<0.50	<0.50	<0.50	<1.5	5.5	--	--	--	--	--
	7/11/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/00	11.92	86.87	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	3.6	<5.0	<5.0	<5.0	<50
	2/6/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/18/01	11.86	86.93	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	8.7	<5.0	<5.0	<5.0	<50
	7/9/01	11.69	87.10	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/01	11.82	86.97	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	3.2	<2.0	<2.0	<2.0	<25
	1/28/02	12.09	86.70	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
MW-10	5/21/02	11.90	86.89	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	2.6	<5.0	<5.0	<5.0	<25
continued	7/25/02	11.78	87.01	--	--	--	--	--	--	--	--	--	--	--	--	--
30.84	11/20/02	11.67	19.17	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	1/13/03	11.89	18.95	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/2/03	11.61	19.23	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	2.0	<2.0	<2.0	<2.0	<25
	7/2/03	11.65	19.19	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/22/03	11.60	19.24	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25
	1/30/04	11.80	19.04	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/22/04	11.54	19.3	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	1.0	<5.0	<5.0	<5.0	<25
MW-11	12/31/92	10.55	86.17	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
96.72	1/28/93	10.06	86.66	--	ND	--	ND	0.40	ND	ND	--	--	--	--	--	--
	4/13/93	10.20	86.52	--	ND	--	0.60	2.6	0.90	4.6	ND	--	--	--	--	--
	10/6/93	10.36	86.36	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	12/21/93	10.32	86.40	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/22/94	10.25	86.47	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	6/18/94	10.30	86.42	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	9/26/94	10.12	86.60	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	11/19/94	10.39	86.33	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/15/95	9.69	87.03	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	6/16/95	9.95	86.77	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	9/13/95	10.00	86.72	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	11/21/95	10.14	86.58	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	2/19/96	10.18	86.54	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	6/11/96	10.24	86.48	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	9/30/96	9.94	86.78	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	11/14/96	10.14	86.58	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/28/97	10.16	86.56	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	5/12/97	9.97	86.75	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	8/14/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/17/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/3/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/7/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/26/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
MW-11	7/21/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
continued	10/19/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/2/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/11/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/6/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/18/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/9/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/01	9.39	87.33	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	1/28/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/21/02	9.75	86.97	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25
	7/25/02	9.65	87.07	--	--	--	--	--	--	--	--	--	--	--	--	--
28.71	11/20/02	9.37	19.34	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/13/03	9.61	19.10	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/2/03	9.32	19.39	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/2/03	9.50	19.21	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/22/03	9.30	19.41	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/30/04	9.60	19.11	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/22/04	9.28	19.43	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	1.0	<5.0	<5.0	<5.0	<25
MW-12	12/31/92	7.89	86.87	--	ND	--	0.90	1.1	0.50	3.1	--	--	--	--	--	--
94.76	1/28/93	7.60	87.16	--	ND	--	ND	ND	ND	ND	--	--	--	--	--	--
	4/13/93	7.53	87.23	--	ND	--	0.90	1.9	1.4	4.6	ND	--	--	--	--	--
	10/6/93	7.82	86.94	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	12/21/93	7.86	86.90	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/22/94	7.77	86.99	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	6/18/94	7.76	87.00	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	9/26/94	7.84	86.92	--	ND	--	ND	0.50	ND	1.1	ND	--	--	--	--	--
	11/19/94	7.87	86.89	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/15/95	7.30	87.46	--	ND	--	ND	ND	ND	ND	0.80	--	--	--	--	--
	6/16/95	7.55	87.21	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	9/13/95	7.63	87.13	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	11/21/95	7.74	87.02	--	ND	--	1.0	1.0	ND	1.5	ND	--	--	--	--	--
	2/19/96	7.74	87.02	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	6/11/96	7.73	87.03	--	ND	--	0.50	1.4	ND	ND	ND	--	--	--	--	--
	9/30/96	7.73	87.03	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
MW-12 continued	11/14/96	7.83	86.93	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/27/97	7.69	87.07	--	ND	--	ND	ND	ND	ND	11	--	--	--	--	--
	5/12/97	7.70	87.06	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	8/14/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/97	7.69	87.07	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/17/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/3/98	7.51	87.25	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	8/7/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/98	7.60	87.16	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	1/26/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/99	7.59	87.17	--	<500	--	<0.50	<0.50	<0.50	<1.5	<10	--	--	--	--	--
	7/21/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/99	7.65	87.11	--	<500	--	<0.50	<0.50	<0.50	<1.5	<10	--	--	--	--	--
	2/2/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/00	7.63	87.13	--	<500	--	<0.50	<0.50	<0.50	<1.5	<1.0	--	--	--	--	--
	7/11/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/00	7.62	87.14	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<50
	2/6/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/18/01	7.48	87.28	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<50
	7/9/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/01	7.51	87.25	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	1/28/02	7.65	87.11	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/21/02	7.64	87.12	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25
	7/25/02	7.65	87.11	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/20/02	9.71	17.10	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	1/13/03	7.62	19.19	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/2/03	7.43	19.38	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	7/2/03	7.65	19.16	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/22/03	7.32	19.49	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25
	1/30/04	7.65	19.16	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/22/04	7.4	19.41	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	1.0	<5.0	<5.0	<5.0	<25
MW-14 103.89	12/10/92	19.71	84.18	--	ND	--	0.50	1.2	ND	1.7	--	--	--	--	--	--
	1/28/93	19.56	84.33	--	ND	--	ND	1.0	ND	ND	--	--	--	--	--	--
	4/13/93	19.60	84.29	--	ND	--	0.70	2.3	1.1	5.1	ND	--	--	--	--	--
	10/6/93	19.74	84.15	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	12/21/93	19.77	84.12	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
MW-14 continued	3/22/94	19.83	84.06	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	6/18/94	19.90	83.99	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	9/26/94	19.85	84.04	--	ND	--	8.7	0.90	0.90	1.0	ND	--	--	--	--	--
	11/19/94	19.94	83.95	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/15/95	19.59	84.30	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	6/16/95	19.65	84.24	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	9/13/95	19.70	84.19	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	11/21/95	19.83	84.06	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	2/19/96	19.80	84.09	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	6/11/96	19.79	84.10	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	9/30/96	19.72	84.17	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	11/14/96	19.75	84.14	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/28/97	19.71	84.18	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	5/12/97	19.67	84.22	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	8/14/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/17/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/3/98	19.45	84.44	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	8/7/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/98	19.44	84.45	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	1/26/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/99	19.58	84.31	--	<500	--	<0.50	<0.50	<0.50	<1.5	<10	--	--	--	--	--
	7/21/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/99	19.49	84.40	--	<500	--	<0.50	<0.50	<0.50	<1.5	<10	--	--	--	--	--
	2/2/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/00	19.48	84.41	--	<500	--	<0.50	<0.50	<0.50	<1.5	<1.0	--	--	--	--	--
	7/11/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/00	19.45	84.44	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<50
	2/6/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/18/01	19.30	84.59	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<50
	7/9/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/01	19.24	84.65	--	<500	--	<0.50	<0.50	<0.50	1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	1/28/02	19.39	84.50	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/21/02	19.41	84.48	--	<500	--	<0.50	<0.50	<0.50	1.5	--	<1.0	<5.0	<5.0	<5.0	<25
	7/25/02	18.43	85.46	--	--	--	--	--	--	--	--	--	--	--	--	--
	35.96 11/20/02	19.35	16.61	--	<500	--	<0.50	<0.50	<0.50	1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	1/13/03	19.46	16.50	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1]	TPH-d [1]	Benzene [2]	Toluene [2]	Ethyl- benzene [2]	Total Xylenes [2]	MTBE [3]	MTBE [4]	DIPE [4]	ETBE [4]	TAME [4]	TBA [4]
					µg/l (ppb)	µg/l (ppb)	µg/l (ppb)	µg/l (ppb)	µg/l (ppb)	µg/l (ppb)	µg/l (ppb)	µg/l (ppb)	µg/l (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)
MW-14 continued	4/2/03	19.33	16.63	--	<500	--	<0.50	<0.50	<0.50	1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	7/2/03	19.40	16.56	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/22/03	19.32	16.64	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25
	1/30/04	19.80	16.16	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/22/04	19.3	16.66	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25
MW-15 99.2	12/10/92	15.45	83.75	--	ND	--	0.70	1.1	0.40	2.9	--	--	--	--	--	--
	1/28/93	15.30	83.90	--	ND	--	ND	0.40	ND	ND	--	--	--	--	--	--
	4/13/93	17.50	81.70	--	ND	--	0.60	1.6	0.70	3.3	ND	--	--	--	--	--
	10/6/93	15.76	83.44	--	ND	--	12.7	2.59	4.11	12.9	ND	--	--	--	--	--
	12/21/93	15.70	83.50	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/22/94	15.61	83.59	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	6/18/94	15.69	83.51	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	9/26/94	15.74	83.46	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	11/19/94	15.81	83.39	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/15/95	15.49	83.71	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	6/16/95	15.60	83.60	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	9/13/95	15.75	83.45	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	11/21/95	15.86	83.34	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	2/19/96	15.87	83.33	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	6/11/96	15.86	83.34	--	ND	--	0.50	1.4	2.4	1.8	ND	--	--	--	--	--
	9/30/96	15.84	83.36	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	11/14/96	15.88	83.32	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/28/97	15.92	83.28	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	5/12/97	15.86	83.34	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	8/14/97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/5/97	15.81	83.39	--	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
	3/17/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/3/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/7/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/26/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/7/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/21/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/2/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/13/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3
Historic Groundwater Levels and Chemical Analysis Results
Chevron Station 9-1312, 2500 El Camino Real, Carlsbad, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation ** (feet)*	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	TPH-d [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	MTBE [4] µg/l (ppb)	DIPE [4] µg/L (ppb)	ETBE [4] µg/L (ppb)	TAME [4] µg/L (ppb)	TBA [4] µg/L (ppb)
MW-15	7/11/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
continued	10/18/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/6/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/18/01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/9/01	15.74	83.46	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/18/01	15.73	83.47	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	1/28/02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/21/02	15.90	83.30	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25
	7/25/02	15.86	83.34	--	--	--	--	--	--	--	--	--	--	--	--	--
31.32	11/20/02	15.72	15.60	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/13/03	15.92	15.40	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/2/03	15.80	15.52	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/2/03	15.89	15.43	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/22/03	15.80	15.52	--	--	--	--	--	--	--	--	--	--	--	--	--
	1/30/04	15.90	15.42	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/22/04	15.73	15.59	--	<500	--	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25
Detection Limits	NA	NA	NA	NA	500	100	0.50	0.50	0.50	1.5	1.0	1.0	2.0	2.0	2.0	25
Notes: [1] Historically analyzed by EPA Method 8015M. Currently analyzed by EPA Method 8260B. [2] Historically analyzed by EPA Method 8021B. Currently analyzed by EPA Method 8260B. [3] Analyzed by EPA Method 8021B. [4] Analyzed by EPA Method 8260B. Definitions: feet* = Feet above mean sea level, ** = Groundwater elevation corrected for LPH if / when present (gasoline density = 0.75 gm/cc), LPH= Liquid Phase Hydrocarbons, Sheen = Discontinuous, non-measurable thickness of LPH, Trace = Continuous, non-measurable thickness of LPH, MTBE = Methyl tert-Butyl Ether, DIPE = Di-isopropyl ether, ETBE = Ethyl tert-Butyl Ether, TAME = tert-Amyl Methyl Ether, TBA = tert-Butanol, µg/l, micrograms per liter, ppb = parts per billion, -- = Not Measured, NA = Not Applicable, ND = Not Detected, DTW = Depth to Water, DTP = Depth to Product, TPH = Total Petroleum Hydrocarbons. Monitoring and sampling activities conducted by SECOR after 2/1/02. GEIMS Global ID # T0607302954																

TABLE 4
CONTAMINANT CHARACTERISTICS
Chevron Service Station No. 9-1312
2500 El Camino Real, Carlsbad, California

Compound/ Chemical	CAS #	Molecular Weight	Pure Phase Solubility (mg/L)	log Koc (log l/kg)	Vapor Pressure (mm Hg)	Henry's Law Constant (dimensionless)	Retardation Factor (Soil Condition A)	Retardation Factor (Soil Condition B)	State of California Drinking Water MCL (mg/L)	Flash Point (°C)	Boiling Point (°C)	California PHG (mg/L)
Gasoline	8006-61-9	95	--	--	--	--	--	--	--	-43	--	--
Benzene	71-43-2	78.11	1780	1.5 - 2.2	76 - 95.2	0.22	1.59	3.38	0.001	-11	80.1	0.00015
Toluene	108-88-3	92.14	535	1.6-2.3	28.4	0.24	1.75	3.99	0.15	4	110.6	0.15
Ethylbenzene	100-41-4	106.17	161	2.0-3.0	9.5	0.35	3.66	11.6	0.7	21	136.2	0.3
ortho-xylene	95-47-6	106.17	170	--	7	--	--	--	--	27-32	144.4	--
meta-xylene	108-38-3	106.17	146	2.0-3.2	9	--	--	--	--	27-32	139.1	--
para-xylene	106-42-3	106.17	156	--	9	--	--	--	--	27-32	138.35	--
methyl tert butyl ether (MTBE)	1634-04-4	88.15	43,000-54,300	1.0-1.1	245-256	0.023-0.12	1.09	1.38	0.013	-10	--	0.013
tert-butanol (TBA)	50-31-7	225.46	Miscible	0.20-1.21	49-56.5	0.00048-0.00059	1.31	2.25	--	11.1	68	--

Notes: MTBE methyl tert-butyl ether
TBA tert-butyl alcohol
mg/L milligrams per liter
C temperature in degrees Celsius
mm Hg pressure in millimeters of mercury
l/kg liters per kilogram
Koc soil sorption coefficient
MCL California Maximum Contaminant Level in groundwater promulgated by California Department of Environmental Protection (CalEPA)
PHG California Public Health Goal promulgated by Office of Environmental Health Hazard Assessment (OEHHHA)
-- Not Applicable

Pure Phase Solubility – The tendency of a chemical to dissolve in water, expressed as milligrams of a chemical that will dissolve in one liter of water.

Soil sorption coefficient (log Koc) - The tendency of a chemical to adsorb to soil, expressed as the ratio of a chemical that will adsorb onto organic carbon to the concentration of the chemical that dissolves in water.

Vapor pressure – The tendency of a chemical to migrate from a pure liquid phase to a gas phase, expressed as the pressure exerted by a chemical in the gas phase when it is in equilibrium with the liquid phase.

Henry's law constant – The tendency of a chemical to partition between the dissolved phase and the gas phase, expressed as the ratio of the equilibrium concentration of the chemical in the gas phase to the equilibrium concentration of the chemical in water.

Retardation factor – A measure of the speed at which a chemical will migrate relative to groundwater as a function of the soil bulk density, the soil effective porosity, soil organic carbon content, and the organic carbon partitioning coefficient of the chemical. It is expressed as the ratio of the velocity of the groundwater to the velocity of the associated chemical plume.

Table 5
Remedial Technology Screening Matrix
Chevron Service Station #9-1312
2500 El Camino Real
Carlsbad, California

	Technology	Description
1.	Pump-and-Treat	Conventional pump-and-treat methods involve pumping contaminated groundwater to the surface for treatment. Treated groundwater is then discharged or re-injected to the aquifer. Pump-and-treat systems are used primarily to accomplish hydraulic containment and/or to reduce the dissolved contaminant concentrations in the aquifer to meet cleanup objectives.
2.	Excavation and Off-Site Disposal	Excavation removes contaminated material from a hazardous waste site using heavy construction equipment, such as backhoes, bulldozers, and front loaders. At certain sites, specially designed equipment may be used to prevent the spread of contaminants. The excavated material is commonly landfilled at an approved off-site disposal facility, but can also be remediated on site and reused.
3.	Soil Vapor Extraction (1)	Soil vapor extraction (SVE), also known as "soil venting" or "vacuum extraction", is an <i>in situ</i> remedial technology that reduces concentrations of volatile constituents in petroleum products adsorbed to soils in the unsaturated (vadose) zone. In this technology, a vacuum is applied through wells near the source of contamination in the soil. Volatile constituents of the contaminant mass "evaporate" and the vapors are drawn toward the extraction wells. Extracted vapor is then treated as necessary before being released to the atmosphere. The increased airflow through the subsurface can also stimulate biodegradation of some of the contaminants, especially those that are less volatile. Wells may be either vertical or horizontal. In areas of high groundwater levels, water table depression pumps may be required to offset the effect of upwelling induced by the vacuum.
4.	High Vacuum Dual-Phase Extraction (1)	High vacuum dual-phase extraction (HVDPE), also known as multi-phase extraction, vacuum-enhanced extraction, or sometimes bioslurping, is an in-situ technology that uses a vacuum pump to recover both air and water to remove various combinations of contaminated groundwater, separate-phase petroleum product, and hydrocarbon vapor from the subsurface. Extracted liquids and vapor are treated and collected for disposal, or re-injected to the subsurface (where permissible under applicable state laws).
5.	Air Sparging w/ Soil Vapor Extraction (1)	Air sparging is an <i>in situ</i> remedial technology that reduces concentrations of volatile constituents in petroleum products that are adsorbed to soils and dissolved in groundwater. This technology, which is also known as " <i>in situ</i> air stripping" and " <i>in situ</i> volatilization," involves the injection of contaminant-free air into the subsurface saturated zone, enabling a phase transfer of hydrocarbons from a dissolved state to a vapor phase. The air is then vented through the unsaturated zone. Air sparging is most often used together with soil vapor extraction (SVE), but it can also be used with other remedial technologies. When air sparging (AS) is combined with SVE, the SVE system creates a negative pressure in the unsaturated zone through a series of extraction wells to control the vapor plume migration. This combined system is called AS/SVE.
6.	In-Situ Enhanced Bioremediation (1)	In-situ groundwater bioremediation is a technology that encourages growth and reproduction of indigenous microorganisms to enhance biodegradation of organic constituents in the saturated zone. In-situ groundwater bioremediation can effectively degrade organic constituents which are dissolved in groundwater and adsorbed onto the aquifer matrix.
7.	Low-Temperature Thermal Desorption (1)	Low-Temperature Thermal Desorption (LTTD), also known as low-temperature thermal volatilization, thermal stripping, and soil roasting, is an ex-situ remedial technology that uses heat to physically separate petroleum hydrocarbons from excavated soils. Thermal desorbers are designed to heat soils to temperatures sufficient to cause constituents to volatilize and desorb (physically separate) from the soil. Although they are not designed to decompose organic constituents, thermal desorbers can, depending upon the specific organics present and the temperature of the desorber system, cause some of the constituents to completely or partially decompose. The vaporized hydrocarbons are generally treated in a secondary treatment unit (e.g., an afterburner, catalytic oxidation chamber, condenser, or carbon adsorption unit) prior to discharge to the atmosphere. Afterburners and oxidizers destroy the organic constituents. Condensers and carbon adsorption units trap organic compounds for subsequent treatment or disposal. Some pre- and post-processing of soil is necessary when using LTTD. Excavated soils are first screened to remove large (greater than 2 inches in diameter) objects. These may be sized (e.g., crushed or shredded) and then introduced back into the feed material. After leaving the desorber, soils are cooled, re-moistened to control dust, and stabilized (if necessary) to prepare them for disposal/reuse. Treated soil may be redeposited onsite, used as cover in landfills, or incorporated into asphalt.

Table 5 (continued)
Remedial Technology Screening Matrix
Chevron Service Station #9-1312
2500 El Camino Real
Carlsbad, California

	Technology	Description
8.	Landfarming (1)	Landfarming, also known as land treatment or land application, is an above-ground remediation technology for soils that reduces concentrations of petroleum constituents through biodegradation. This technology usually involves spreading excavated contaminated soils in a thin layer on the ground surface and stimulating aerobic microbial activity within the soils through aeration and/or the addition of minerals, nutrients, and moisture. The enhanced microbial activity results in degradation of adsorbed petroleum product constituents through microbial respiration. If contaminated soils are shallow (<i>i.e.</i> , less than 3 feet below ground surface), it may be possible to effectively stimulate microbial activity without excavating the soils. If petroleum-contaminated soil is deeper than 5 feet, the soils should be excavated and reapplied on the ground surface.
9.	Biopiles (1)	Biopiles, also known as biocells, bioheaps, biomounds, and compost piles, are used to reduce concentrations of petroleum constituents in excavated soils through the use of biodegradation. This technology involves heaping contaminated soils into piles (or "cells") and stimulating aerobic microbial activity within the soils through the aeration and/or addition of minerals, nutrients, and moisture. The enhanced microbial activity results in degradation of adsorbed petroleum-product constituents through microbial respiration. Biopiles are similar to landfarms in that they are both above-ground, engineered systems that use oxygen, generally from air, to stimulate the growth and reproduction of aerobic bacteria which, in turn, degrade the petroleum constituents adsorbed to soil. While landfarms are aerated by tilling or plowing, biopiles are aerated most often by forcing air to move by injection or extraction through slotted or perforated piping placed throughout the pile.
10.	Bioventing (1)	Bioventing is an in situ remediation technology that uses indigenous microorganisms to biodegrade organic constituents adsorbed to soils in the unsaturated zone. Soils in the capillary fringe and the saturated zone are not affected. In bioventing, the activity of the indigenous bacteria is enhanced by inducing air (or oxygen) flow into the unsaturated zone (using extraction or injection wells) and, if necessary, by adding nutrients. When extraction wells are used for bioventing, the process is similar to soil vapor extraction (SVE). However, while SVE removes constituents primarily through volatilization, bioventing systems promote biodegradation of constituents and minimize volatilization (generally by using lower air flow rates than for SVE). In practice, some degree of volatilization and biodegradation occurs when either SVE or bioventing is used.
11.	Biosparging (1)	Biosparging is an in-situ remediation technology that uses indigenous microorganisms to biodegrade organic constituents in the saturated zone. In biosparging, air (or oxygen) and nutrients (if needed) are injected into the saturated zone to increase the biological activity of the indigenous microorganisms. Biosparging can be used to reduce concentrations of petroleum constituents that are dissolved in groundwater, adsorbed to soil below the water table, and within the capillary fringe. Although constituents adsorbed to soils in the unsaturated zone can also be treated by biosparging, bioventing is typically more effective for this situation. When volatile constituents are present, biosparging is often combined with soil vapor extraction (SVE) or bioventing and can also be used with other remedial technologies. When biosparging is combined with vapor extraction, the vapor extraction system creates a negative pressure in the vadose zone through a series of extraction wells that control the vapor plume migration.
12.	In Situ Chemical Oxidation	In Situ Chemical Oxidation (ISCO) involves injecting chemical oxidants (e.g. Fenton's Reagent, KMnO ₄ , Ozone, H ₂ O ₂) into the vadose zone and/or ground water to oxidize contaminants. This is an emerging technology that can be applied at highly contaminated sites or source areas to reduce contaminant concentrations. This technology, generally, is not cost effective for plumes with low contaminant concentrations. The effectiveness of ISCO is sensitive to variations in the hydraulic conductivity of the soil as well as to the distribution of contaminant mass.
13.	Monitoring Natural Attenuation	Monitored Natural Attenuation (MNA) is not a "technology", per se. It generally describes a range of physical and biological processes, which, unaided by deliberate human intervention, reduce the concentration, toxicity, or mobility of contaminants in soil and/or groundwater. These processes take place whether or not other active cleanup measures are in place. However, techniques and technologies for predicting and monitoring natural attenuation have been developed. MNA refers to the use of these techniques to monitor and document the progress of natural attenuation at a site.
14.	Containment/Isolation	Contaminated soil and/or groundwater is isolated from receptors by various methods such as capping, chemical/physical stabilization, or the construction of containment cells or barriers.

Notes: (1) Technology descriptions obtained from "How to Evaluate Alternative Cleanup Technologies for Underground Storage Tank Sites: A Guide for Corrective Action Plan Reviewers.", EPA - May 1995.

TABLE 6
EVALUATION OF SELECTED REMEDIAL ALTERNATIVES
Chevron Facility 9-1312

Evaluation Criteria	Alternative 1 – Oxygen Releasing Compound (ORC®)	Alternative 2 – Iso-Gen™ Dissolved Oxygen Generator	Alternative 3 – Remediation by Natural Attenuation
1. Description of Alternative	ORC is injected as a slurry into the impacted groundwater zone using a direct-push rig. The ORC releases oxygen, increasing the rate of biodegradation. Approximately 2,000 pounds of ORC would be added to the impacted area.	Light Non-Aqueous Phase Liquid (LNAPL) skimming involves removing LNAPL from wells containing mobile LNAPL floating on the static groundwater surface. Fluid intakes for LNAPL skimmers are floating buoys that maintain the intake in the LNAPL or near the LNAPL/groundwater interface.	Dissolved hydrocarbon plume is allowed to reach MCLs by natural attenuation.
2. Level of Protection of Human Health, the Environment, and Beneficial Uses of Ground and Surface Waters	<p>This alternative provides an adequate level of protection of human health, the environment, and beneficial uses of ground and surface waters as the plume is not migrating and is decreasing in size and concentration.</p> <p>Implementation would not increase the potential exposure of humans to hydrocarbon impacted soil and groundwater.</p>	<p>This alternative provides an adequate level of protection of human health, the environment, and beneficial uses of ground and surface waters as the plume is not migrating and is decreasing in size and concentration.</p> <p>Implementation would not increase the potential exposure of humans to hydrocarbon impacted soil and groundwater.</p>	<p>This alternative provides an adequate level of protection of human health, the environment, and beneficial uses of ground and surface waters as the plume is not migrating and is decreasing in size and concentration.</p> <p>Implementation would not increase the potential exposure of humans to hydrocarbon impacted soil and groundwater.</p>
3. Reduction of Hydrocarbons	This alternative will reduce the concentration of contaminants dissolved in groundwater and adsorbed to saturated zone soil.	This alternative will reduce the concentration of contaminants dissolved in groundwater and adsorbed to saturated zone soil.	This alternative relies solely on natural attenuation for LNAPL reduction and dissolved hydrocarbon reduction. Residual hydrocarbons will be present in the subsurface for the foreseeable future.

TABLE 6 (Continued)
EVALUATION OF REMEDIAL ALTERNATIVES
Chevron Facility 9-1312

Evaluation Criteria	Alternative 1 – Oxygen Releasing Compound (ORC®)	Alternative 2 – Iso-Gen™ Dissolved Oxygen Generator	Alternative 3 – Remediation by Natural Attenuation
4. Implementation and Operation	Easy to implement. Minor disruptions to business operations for the neighboring site during installation of ORC.	Moderately difficult to implement. Requires power, shallow trenching, and O&M of down hole units and controller system. Some disruption to business operations for the site and neighboring sites during installation and operation of the remediation system.	Easy to implement. No disruptions to business operations during implementation.
5. Cost Effectiveness	Approximate Cost = \$75,000	Approximate Cost = \$47,000	Approximate Cost = \$20,000
6. Compliance with Regulatory Guidelines	This alternative can be implemented within regulatory guidelines.	This alternative can be implemented within regulatory guidelines.	This alternative can be implemented within regulatory guidelines.
7. Short Term Effectiveness	The short-term effectiveness of this alternative is minimal since it will likely take more than 2 years to reach target groundwater concentrations.	The short-term effectiveness of this alternative is minimal since it will likely take more than 2 years to reach target groundwater concentrations.	Benzene and MTBE attenuation trend analysis indicated that cleanup goals should be reached within 26 years.
8. Long Term Effectiveness	Effective in the long term. This alternative is the most likely to be effective in the long term.	Effective in the long term. This alternative is the most likely to be effective in the long term.	This alternative will likely not be as effective in the long term as alternatives 1 and 2.
9. Community Acceptance	The impact to the nearby community and population would be negligible.	The impact to the nearby community and population would be negligible.	No community acceptance problems anticipated for this alternative.
10. Impacts on Water Conservation	This alternative would not impact water conservation either negatively or positively.	This alternative would not impact water conservation either negatively or positively.	This alternative would not impact water conservation either negatively or positively.

Table 7
Cost Estimate for Alternative 1 - Oxygen Releasing Compound (ORC)
Chevron Facility 9-1312
2500 El Camino Real, Carlsbad, California

Capital Equipment and Construction Elements

Pounds of ORC need	50
Cost per Pound of ORC	\$10
Misc Parts	\$500
Permits/Installation	\$3,000
Total Capital Cost	\$4,000

Utility Costs

Total Motor HP	0
Run Time (%)	0%
Power Cost (\$/kw-hr)	\$0.00
Monthly Power Cost	\$0.00
Natural Gas	\$0.00
Monthly Utilities	\$0

O&M Costs

Expected Duration (months)	60
Quarterly O&M (ORC Sock Replacement)	\$500.00
Total O&M Costs (incl Utilities)	\$10,000

Total Cost	\$14,000
-------------------	-----------------

Table 8
 Cost Estimate for Alternative 2 - Iso-Gen™ Dissolved Oxygen Generator
 Chevron Facility 9-1312
 2500 El Camino Real, Carlsbad, California

Capital Equipment

Controller	\$7,500
Down Hole Units (4 units/controller)	\$10,000
Total Equipment Costs	\$17,500

Construction Costs

Trenching	\$10,000
Installation	\$2,000
Total Construction Costs	\$12,000

O&M Costs

Duration of Operation (months)	36
Maintenance	\$5,000
Cleaning (every 6 months)	\$2,000
Total O&M Costs (incl Utilities)	\$7,000

Total Cost	\$36,500
-------------------	-----------------

Table 9
Cost Estimate for Alternative 3 - Remediation by Natural Attenuation
Chevron Facility 9-1312
2500 El Camino Real, Carlsbad, California

<u>Capital Equipment and Construction</u>	
Total Cap/Const	\$0
<u>Utility Costs</u>	
Monthly Utilities	\$0
<u>O&M Costs</u>	
Total O&M Costs (incl Utilities)	\$0
Total Cost	\$0

TABLE 10
CONCENTRATION TREND ANALYSIS SUMMARY
Chevron Facility #9-1312

Well	Compound Evaluated	Max Contaminant Level - C_{MCL} (ug/L) ⁽¹⁾	Initial Max. Concentration C_0 (ug/L) ⁽²⁾	Sampling Date for C_0	Current Reference Date Used	Estimated Degradation Rate Constant - k (day ⁻¹)	Time to Reach MCL from C_0 - t (days)	Current Elapsed Time from Date C_0 Reported (days)	Estimated Time to Reach C_{MCL} from Current Reference Date (yrs)
B-7	Benzene	1	1,600	6/16/1995	9/1/2004	0.0016	4,611	3,365	3.41
MW-7	Benzene	1	320	11/5/1997	9/1/2004	0.0007	8,240	2,492	15.75
MW-8	Benzene	1	2,600	5/19/1992	9/1/2004	0.0009	8,737	4,488	11.64
MW-9	Benzene	1	4,600	4/13/1993	9/1/2004	0.0008	10,542	4,159	17.49
MW-2	Benzene	1	64	10/22/2003	9/1/2004	0.0007	5,941	315	15.41
MW-3	Benzene	1	11	10/22/2003	9/1/2004	0.0007	3,426	315	8.52
MW-4	Benzene	1	17	4/2/2003	9/1/2004	0.0007	4,047	518	9.67
MW-6	Benzene	1	720	4/2/2003	9/1/2004	0.0007	9,399	518	24.33
B-7	MTBE	13	28,000	6/16/1995	9/1/2004	0.001	7,675	3,365	11.81
MW-7	MTBE	13	6,000	4/7/1999	9/1/2004	0.0004	15,336	1,974	36.61
MW-8	MTBE	13	36,000	11/19/1994	9/1/2004	0.0012	6,605	3,574	8.30
MW-9	MTBE	13	420	4/7/1999	9/1/2004	0.0011	3,159	1,974	3.25

TABLE 10
CONCENTRATION TREND ANALYSIS SUMMARY
Chevron Facility #9-1312

Well	Compound Evaluated	Max Contaminant Level - C_{MCL} (ug/L) ⁽¹⁾	Initial Max. Concentration C_0 (ug/L) ⁽²⁾	Sampling Date for C_0	Current Reference Date Used	Estimated Degradation Rate Constant - k (day ⁻¹)	Time to Reach MCL from C_0 - t (days)	Current Elapsed Time from Date C_0 Reported (days)	Estimated Time to Reach C_{MCL} from Current Reference Date (yrs)
MW-2	MTBE	13	78	4/2/2003	9/1/2004	0.0004	4,479	518	10.85
MW-3	MTBE	13	400	4/2/2003	9/1/2004	0.0004	8,566	518	22.05
MW-4	MTBE	13	1,400	4/2/2003	9/1/2004	0.0004	11,698	518	30.63
MW-6	MTBE	13	250	4/2/2003	9/1/2004	0.0004	7,391	518	18.83

Notes: Equation used to estimate time to reach MCL is $C = C_0 e^{-kt}$, where:

C = Concentration at time t

C_0 = Initial Concentration

k = Degradation rate constant (time⁻¹)

t = time

-- = Not Applicable

< = Less than reporting limit shown.

ug/L = Micrograms per liter.

(1) State of California Primary Maximum Contaminant Level (MCL) for Drinking Water

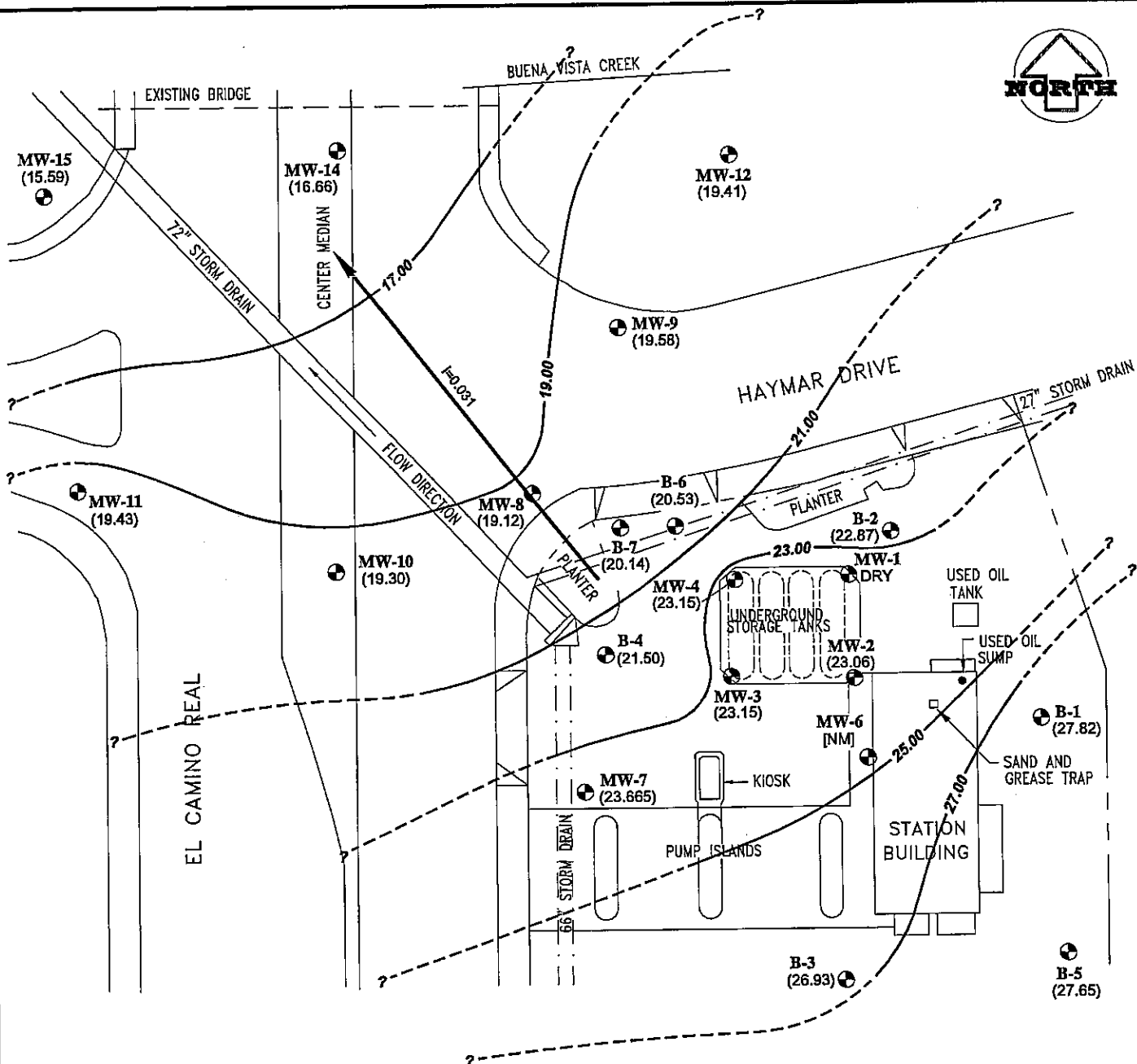
(2) Recent maximum concentration from post-remediation groundwater monitoring data

APPENDICES

APPENDIX A

Groundwater Monitoring Report Excerpts

P:\CAD\ALLPROJECTS\2004\GW4-04.DWG MODIFIED BY EDDGE ON AUG 12, 2004 - 13:49



LEGEND:

- MW-2 (27.79) GROUNDWATER MONITORING WELL
- (27.79) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (MSL)
- ? - 20.00 - GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MSL. DASHED WHERE ESTIMATED, QUERIED WHERE UNKNOWN
- $I=0.031$ ESTIMATED DIRECTION AND GRADIENT OF GROUNDWATER FLOW
- [NM] NOT MEASURED

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SCALE: 1" = 50'

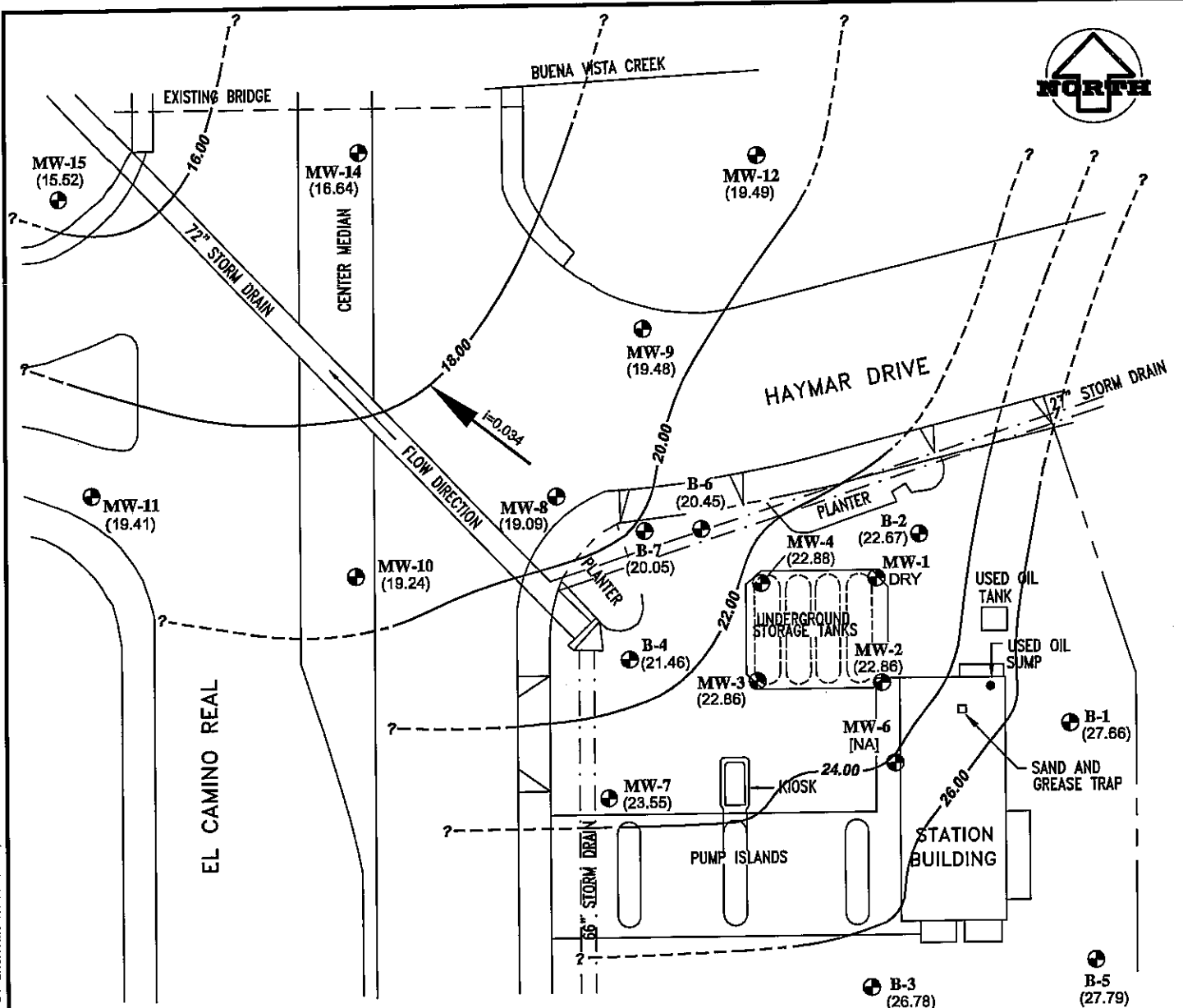
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CHECKED:
APPROVED:
DATE: 7/7/04
JOB No.: 08CH.41312.04
CAD FILE: 91312GW4-04

PREPARED BY:

SECOR
2655 Camino del Rio North, Suite 302
San Diego, California

PREPARED FOR:
CHEVRON STATION NO. 9-1312
2500 El Camino Real
Carlsbad, California

FIGURE: 4
GROUNDWATER GRADIENT MAP
APRIL 22, 2004



DRAWN BY: RJO
 CHECKED:
 APPROVED:
 DATE: 1/6/03
 JOB No.: 08CH.41312.03
 CAD FILE: 91312GW07-03

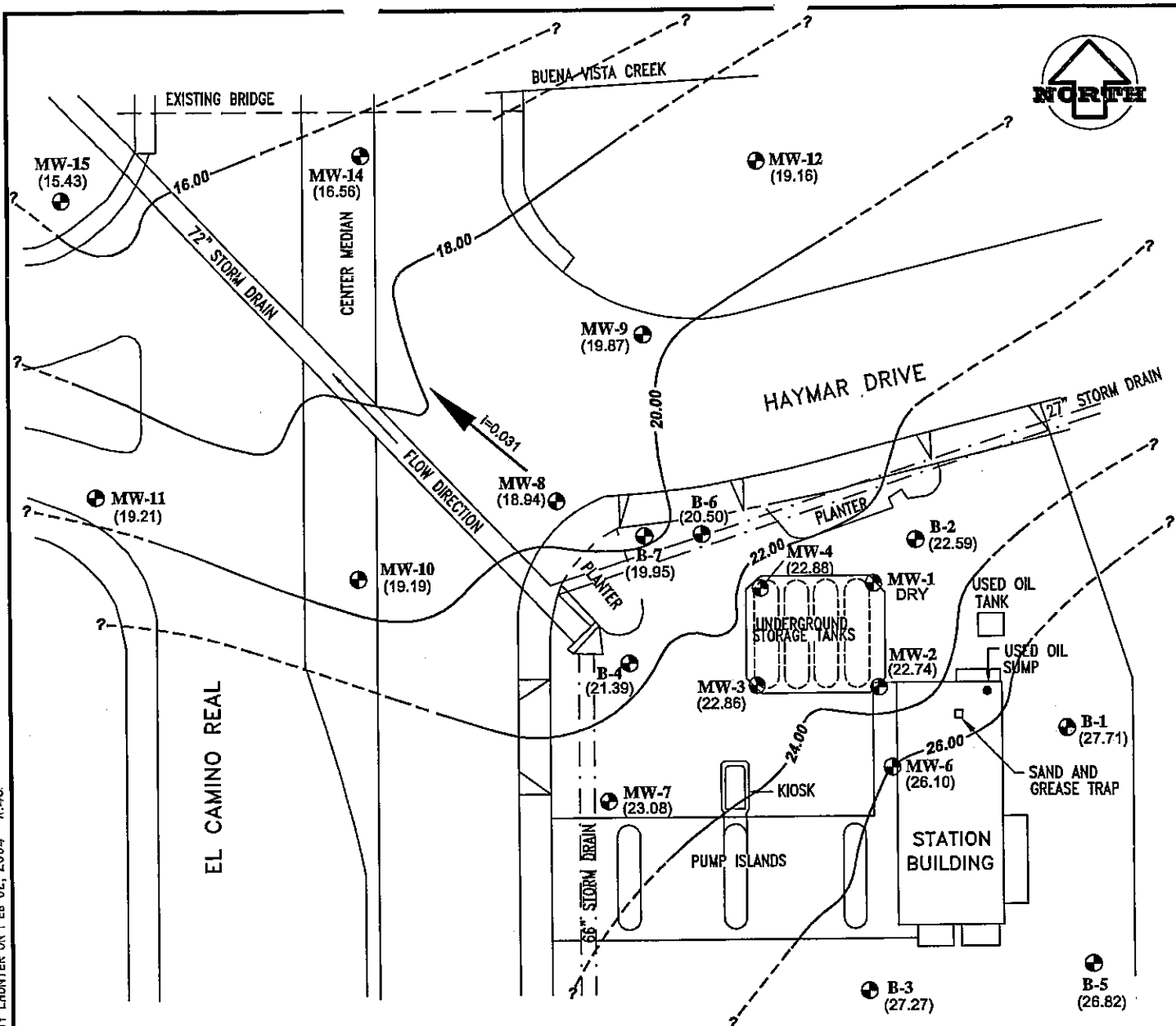
PREPARED BY:

SECOR
 2655 Camino del Rio North, Suite 302
 San Diego, California

PREPARED FOR:
 CHEVRON STATION NO. 9-1312
 2500 El Camino Real
 Carlsbad, California

FIGURE: 6
GROUNDWATER GRADIENT MAP
 OCTOBER 22, 2003

K:\ALLPROJECTS\2003\09\1312-2K3191312GW07-03.DWG MODIFIED BY LUNTER ON FEB 02, 2004 - 11:45



LEGEND:

- MW-2 GROUNDWATER MONITORING WELL
- (27.27) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (MSL)
- ? - 26.00 - GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MSL. DASHED WHERE ESTIMATED, QUERIED WHERE UNKNOWN
- $i=0.031$ ESTIMATED DIRECTION OF GROUNDWATER FLOW

25 0 50
SCALE: 1" = 50'

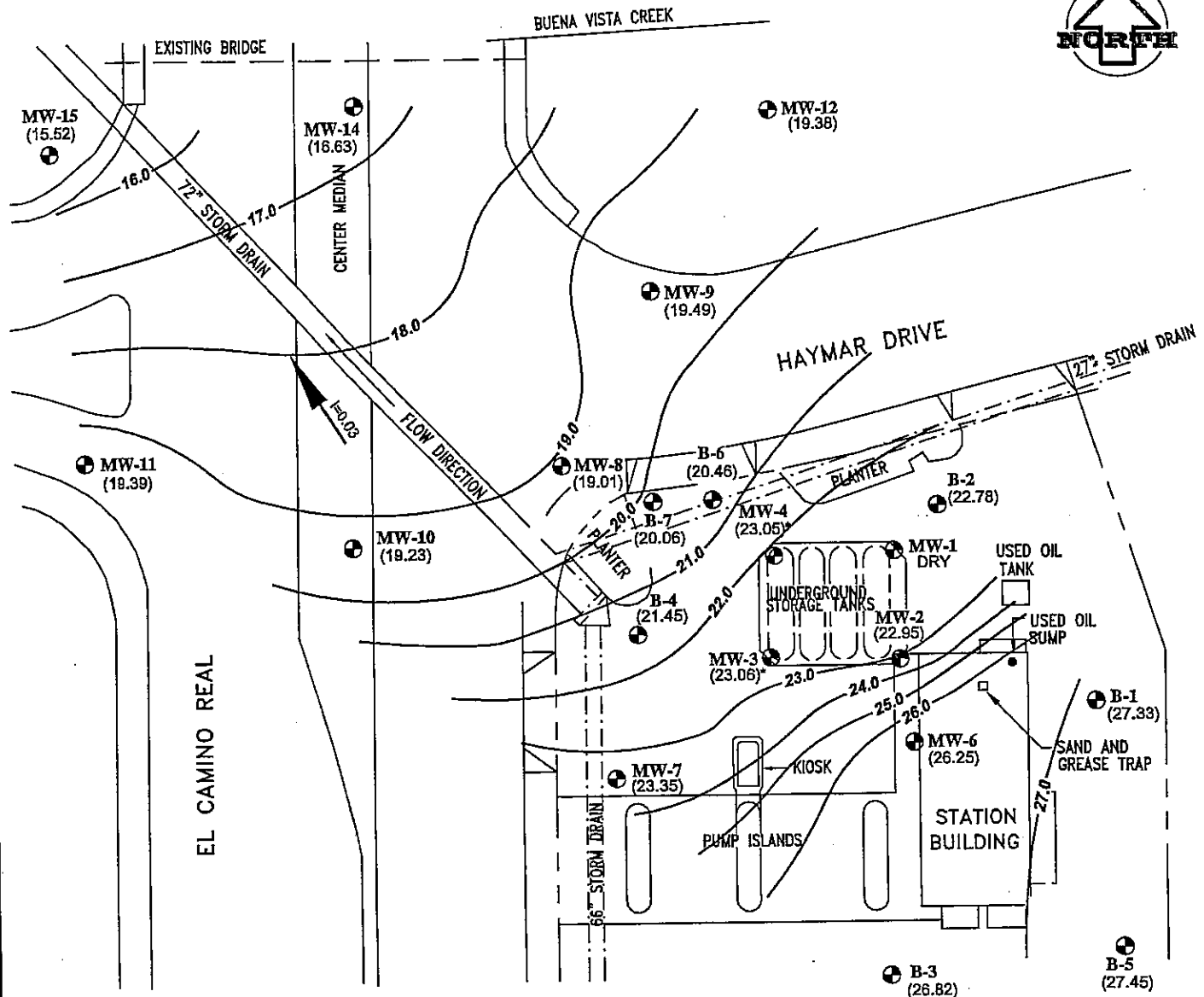
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APPROVED:
DATE: 1/6/03
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PREPARED BY:



SECOR
2655 Camino del Rio North, Suite 302
San Diego, California

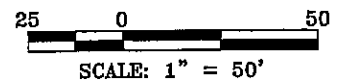
PREPARED FOR:
CHEVRON STATION NO. 9-1312
2500 El Camino Real
Carlsbad, California

FIGURE: 2
GROUNDWATER GRADIENT MAP
JULY 2, 2003



LEGEND:

- MW-2  GROUNDWATER MONITORING WELL
* MW-3 & MW-4 NOT USED IN GENERATING CONTOURS
(19.01) GROUNDWATER ELEVATION (FEET RELATIVE TO AN ARBITRARY DATUM)
— 18.00 — GROUNDWATER ELEVATION CONTOUR
 i=0.03 ESTIMATED DIRECTION OF GROUNDWATER FLOW



DRAWN BY: LGH
CHECKED:
APPROVED:
DATE: 9/02/03
JOB No.: 08CH.41312.03
CAD FILE: 91312GW4-03

PREPARED BY:

SECOR
2655 Camino del Rio North, Suite 302
San Diego, California

PREPARED FOR:
CHEVRON STATION NO. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

FIGURE: 4
**GROUNDWATER GRADIENT
MAP - APRIL 2, 2003**



BUENA VISTA CREEK

EXISTING BRIDGE

MW-15
(15.40)

MW-14
(16.50)

MW-12
(19.19)

16.0

72" STORM DRAIN

CENTER MEDIAN

17.0

18.0
 $i=0.03$

MW-9
(19.29)

HAYMAR DRIVE

MW-11
(19.10)

MW-8
(18.83)

MW-10
(18.95)

B-7
(19.94)

B-6
(20.47)

PLANTER

MW-4
(22.66)

MW-1
(22.42)

UNDERGROUND
STORAGE TANKS

MW-2
(22.54)

USED OIL
TANK

USED OIL
SUMP

B-1
(27.40)

SAND AND
GREASE TRAP

EL CAMINO REAL

MW-7
(22.96)

PUMP ISLANDS

MW-3
(22.65)


MW-6
(25.86)

STATION
BUILDING

B-3
(26.50)

B-5
(27.52)

LEGEND:

- MW-2  GROUNDWATER MONITORING WELL
(9.46) GROUNDWATER ELEVATION (FEET
RELATIVE TO AN ARBITRARY DATUM)
—19.00— GROUNDWATER ELEVATION CONTOUR
 $i=0.03$ ESTIMATED DIRECTION OF GROUNDWATER
FLOW

25 0 50
SCALE: 1" = 50'

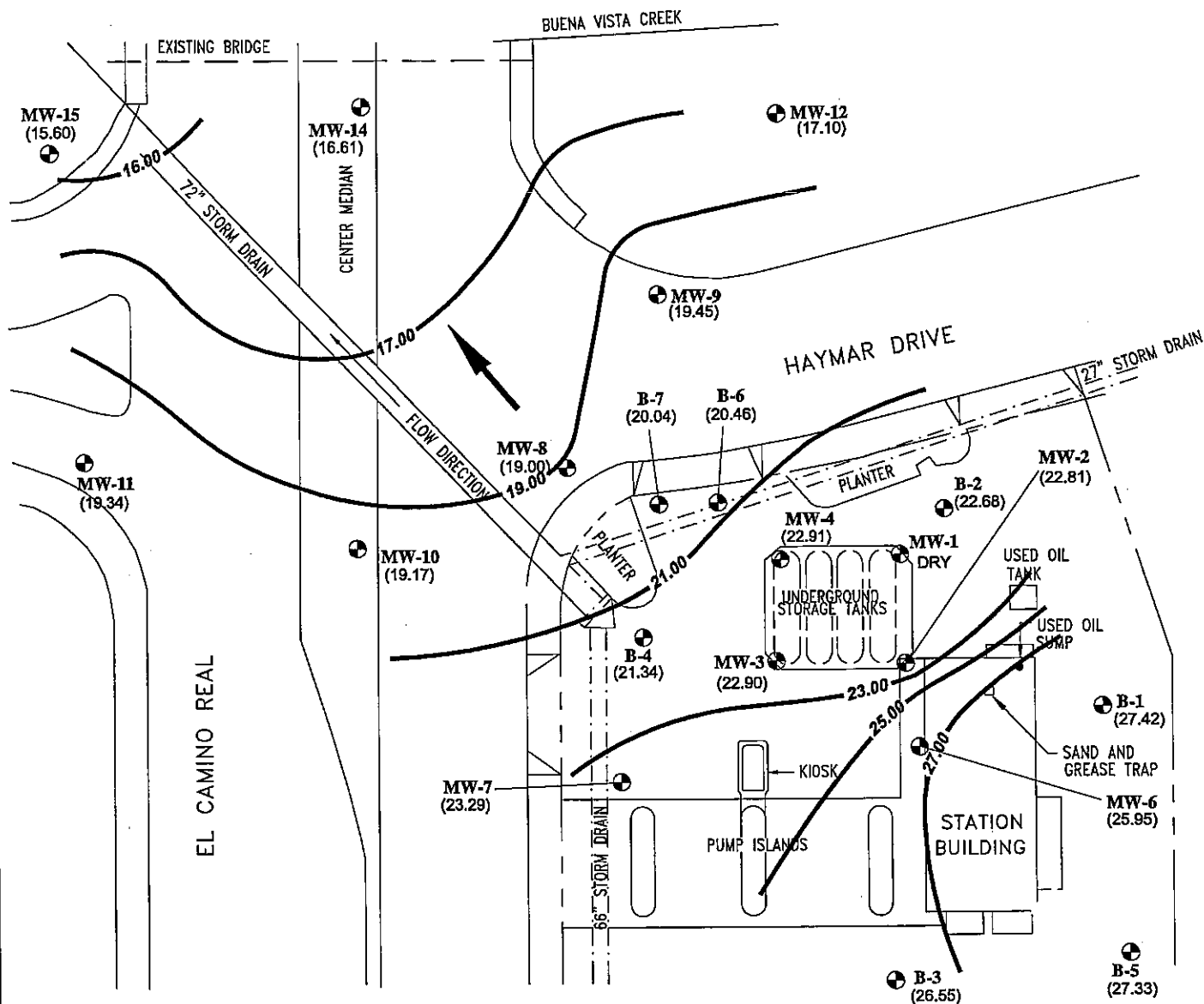
DRAWN BY: LGH
CHECKED:
APPROVED:
DATE: 9/02/03
JOB No.: 08CH.41312.03
CAD FILE: 91312GW1-03

PREPARED BY:

SECOR
2655 Camino del Rio North, Suite 302
San Diego, California

PREPARED FOR:
CHEVRON STATION NO. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

FIGURE: 2
GROUNDWATER GRADIENT
MAP - JANUARY 13, 2003



LEGEND:

- MW-2 GROUNDWATER MONITORING WELL
- (25.95) GROUNDWATER ELEVATION (FEET ABOVE SEA LEVEL)
- 23.00— GROUNDWATER ELEVATION CONTOUR
- ESTIMATED DIRECTION OF GROUNDWATER FLOW



25 0 50
SCALE: 1" = 50'

SECOR
International Incorporated
2655 CAMINO DEL RIO N., SUITE 302
SAN DIEGO, CA. 92108

PROJECT: 08CH.51312.00 DATE: 01/21/03

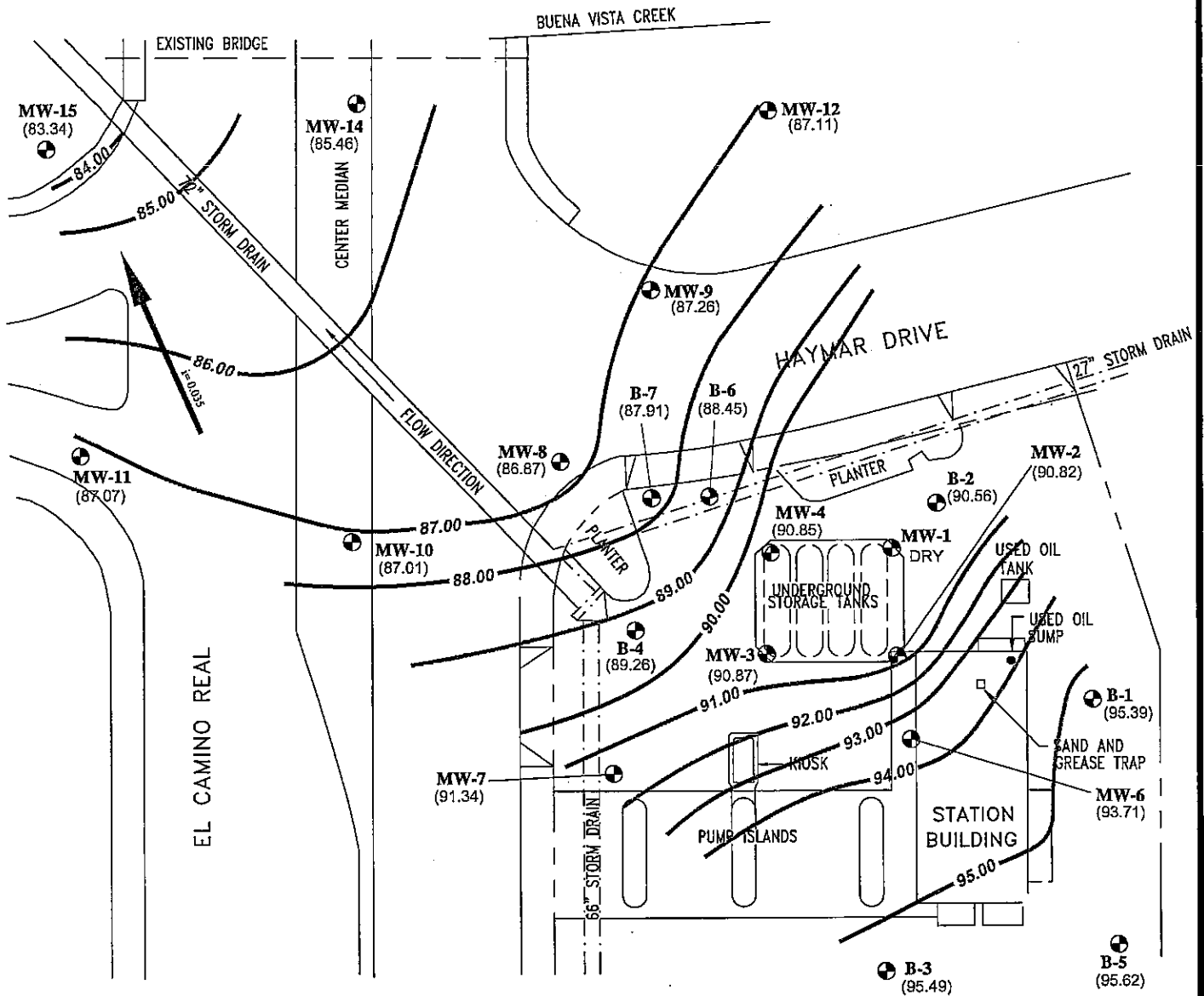
NOTES:

SITE PLAN ADAPTED FROM
BBC ENVIRONMENTAL, INC. FIGURE.

FIGURE 2

GROUNDWATER GRADIENT MAP - NOV. 20, 2002

CHEVRON STATION NO. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA



LEGEND:

- MW-2 GROUNDWATER MONITORING WELL
- (86.89) GROUNDWATER ELEVATION (FEET RELATIVE TO AN ARBITRARY DATUM)
- 83.00 — GROUNDWATER ELEVATION CONTOUR
- 0.0035 ESTIMATED DIRECTION OF GROUNDWATER FLOW



25 0 50
SCALE: 1" = 50'

SECOR

International Incorporated
2655 CAMINO DEL RIO N., SUITE 302
SAN DIEGO, CA. 92108

K:_2002dwgs\Chevron2002\9-1312-2K2\9-13120GW7-02.DWG

PROJECT: 08CH.51312.00 DATE: 10/24/02

NOTES:

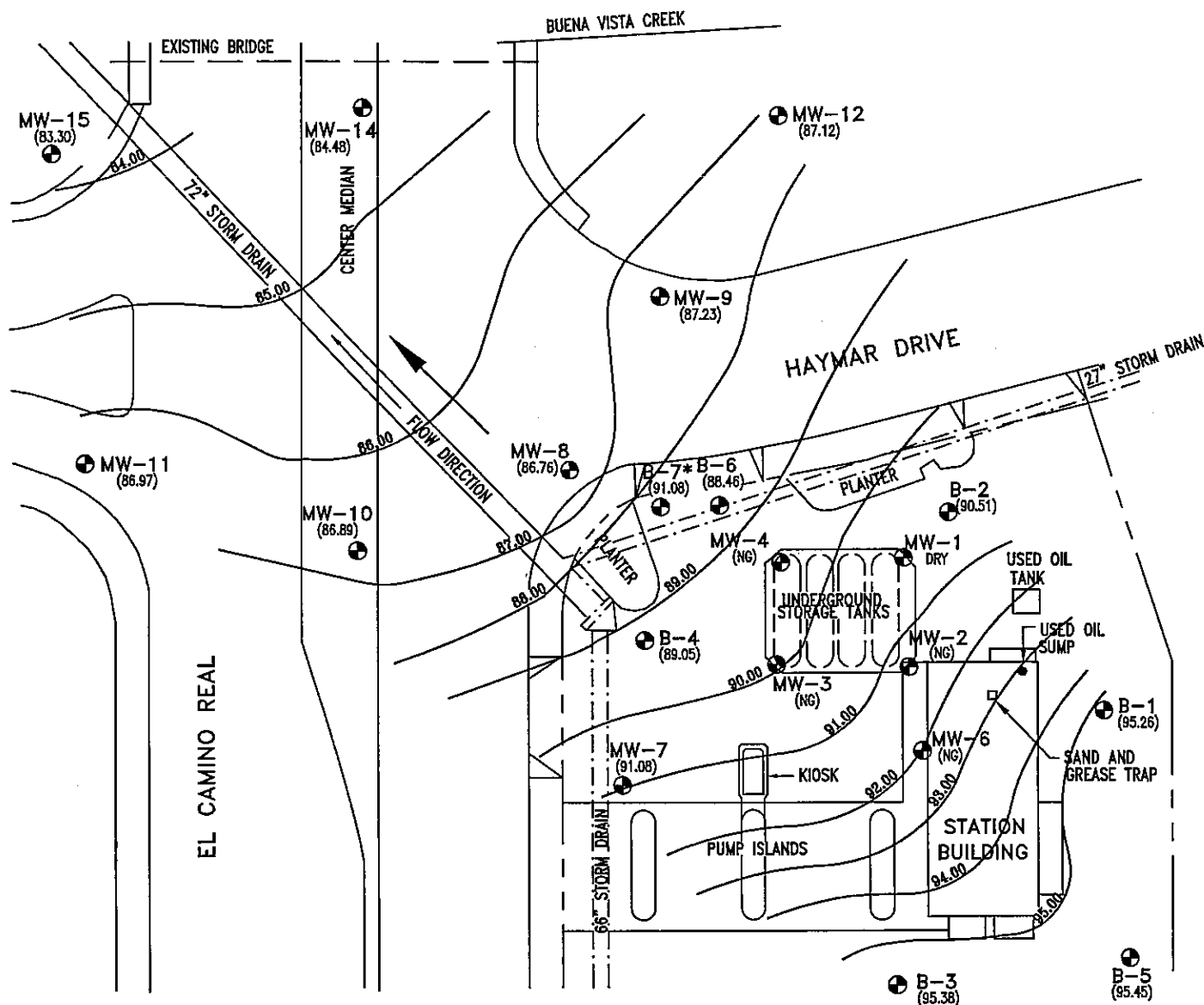
SITE PLAN ADAPTED FROM
BBC ENVIRONMENTAL, INC. FIGURE.

FIGURE 2

GROUNDWATER GRADIENT MAP - JULY 25, 2002

CHEVRON STATION NO. 9-1312

2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA



LEGEND:

- ⊕ MW-2 GROUNDWATER MONITORING WELL
- (86.89) GROUNDWATER ELEVATION (FEET RELATIVE TO AN ARBITRARY DATUM)
- (NG) NOT GAUGED
- * ELEVATION NOT USED TO CONTOUR
- ESTIMATED DIRECTION OF GROUNDWATER FLOW DIRECTION
- 83.00— GROUNDWATER ELEVATION CONTOUR



25 0 50
SCALE: 1" = 50'

SECOR
International Incorporated
2655 CAMINO DEL RIO N., SUITE 302
SAN DIEGO, CA. 92108

NOTES:

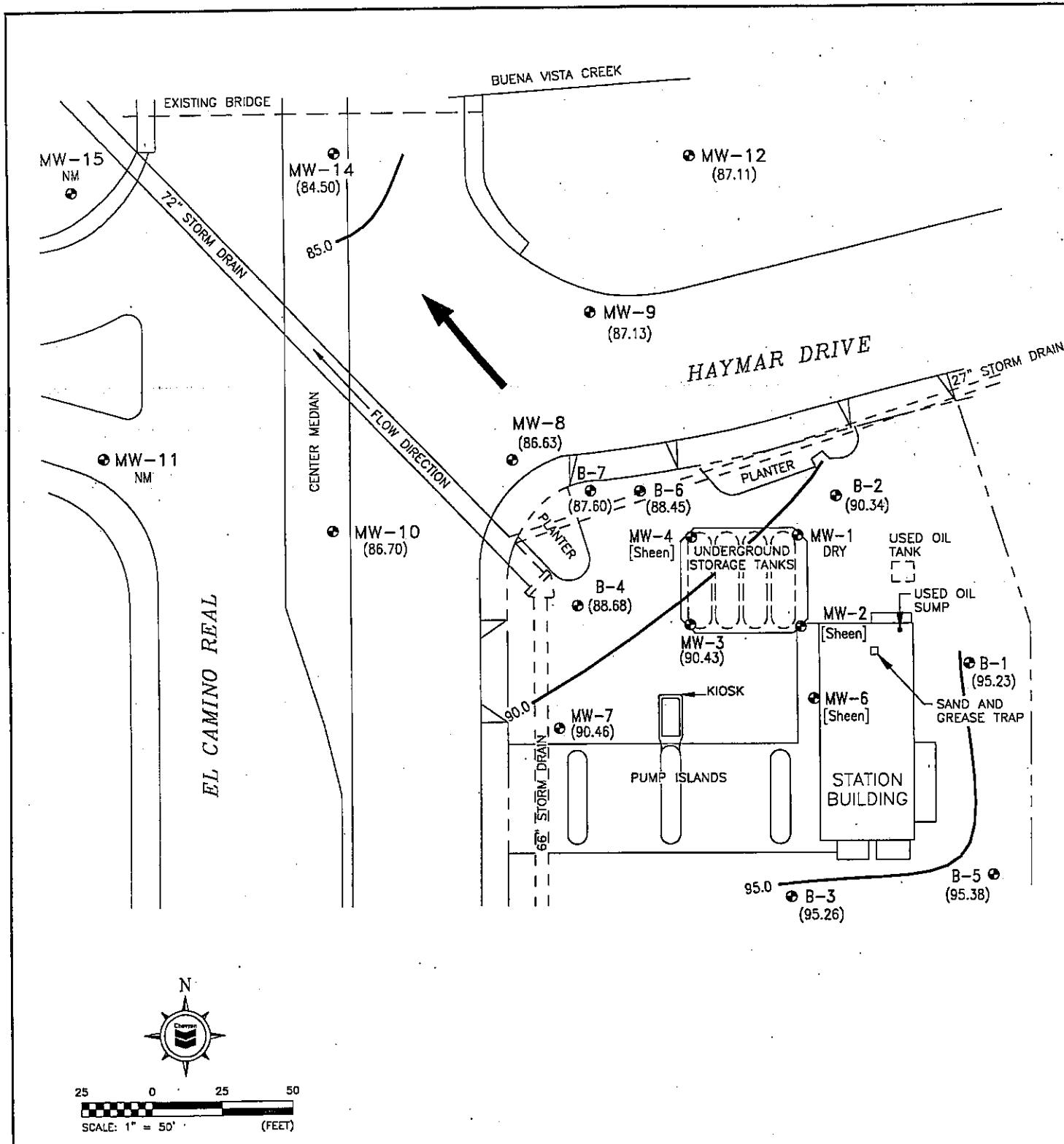
SITE PLAN ADAPTED FROM
BBC ENVIRONMENTAL, INC. FIGURE.

FIGURE 2 GROUNDWATER GRADIENT MAP - MAY 21, 2002

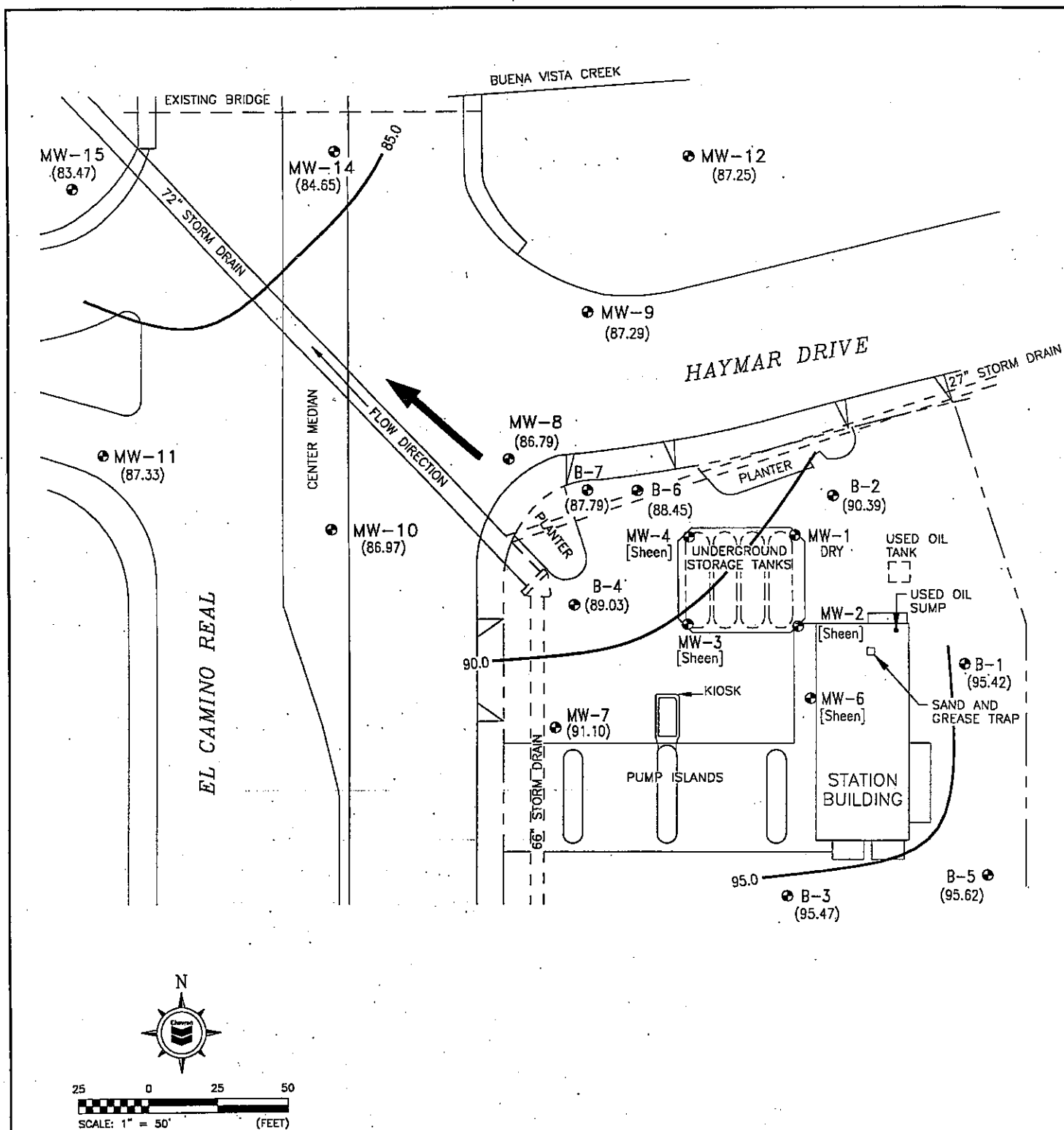
CHEVRON STATION NO. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

..2002dwgs\Chevron2002\9-1312-2K2\9-1312GW5-02r.DWG

PROJECT: 08CH.51312.00 DATE: 8/26/02



LEGEND		GROUNDWATER GRADIENT MAP	
● B-7 (87.60)	MONITORING WELL. GROUNDWATER ELEVATION IN FEET ABOVE AN ARBITRARY DATUM, MEASURED 1/28/02.	CHEVRON STATION No. 9-1312 2500 EL CAMINO REAL CARLSBAD, CALIFORNIA	
NM	NOT MEASURED.	FIGURE No. 2 PROJECT No. CHEVRON R7.4	
— 85.0	ESTIMATED CONTOURS OF EQUAL GROUNDWATER ELEVATION.	▼ BBC ENVIRONMENTAL, INC.	
[Sheen]	FREE PRODUCT [Feet].		
➔	ESTIMATED GROUNDWATER FLOW DIRECTION.		



LEGEND

● B-7
(87.79)

MONITORING WELL.
GROUNDWATER ELEVATION
IN FEET ABOVE AN ARBITRARY
DATUM, MEASURED 10/18/01.

— 85.0

ESTIMATED CONTOURS OF EQUAL
GROUNDWATER ELEVATION.

[Sheen]

FREE PRODUCT [Feet].



ESTIMATED GROUNDWATER
FLOW DIRECTION.

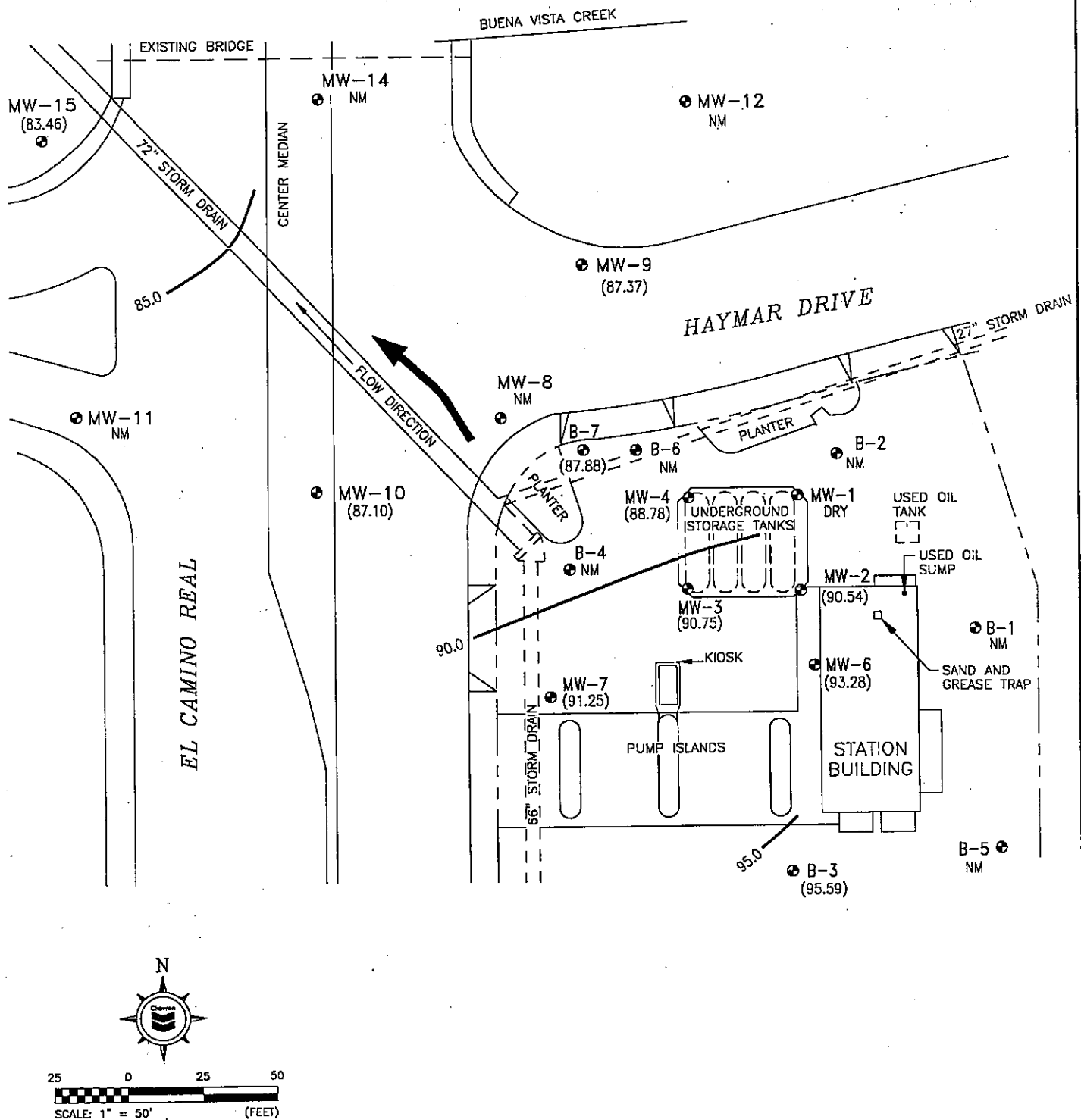
GROUNDWATER GRADIENT MAP

CHEVRON STATION No. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

FIGURE No. 2

PROJECT No. CHEVRON R7.3

▼ BBC ENVIRONMENTAL, INC.



LEGEND

● B-7
(87.88)

MONITORING WELL.
GROUNDWATER ELEVATION
IN FEET ABOVE AN ARBITRARY
DATUM, MEASURED 7/9/01.

— 85.0

ESTIMATED CONTOURS OF EQUAL
GROUNDWATER ELEVATION.

NM

NOT MEASURED.



ESTIMATED GROUNDWATER
FLOW DIRECTION.

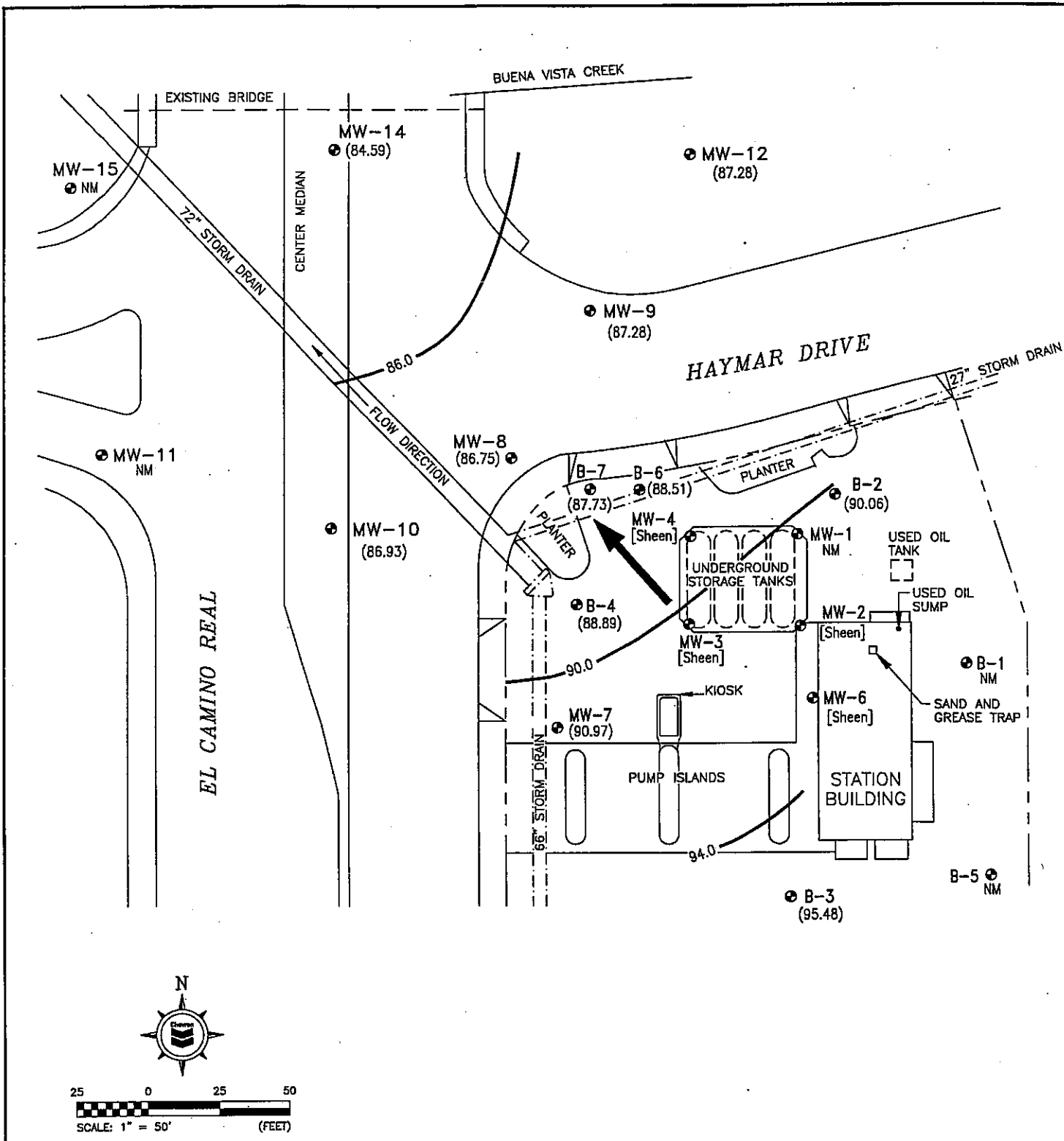
GROUNDWATER GRADIENT MAP

CHEVRON STATION No. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

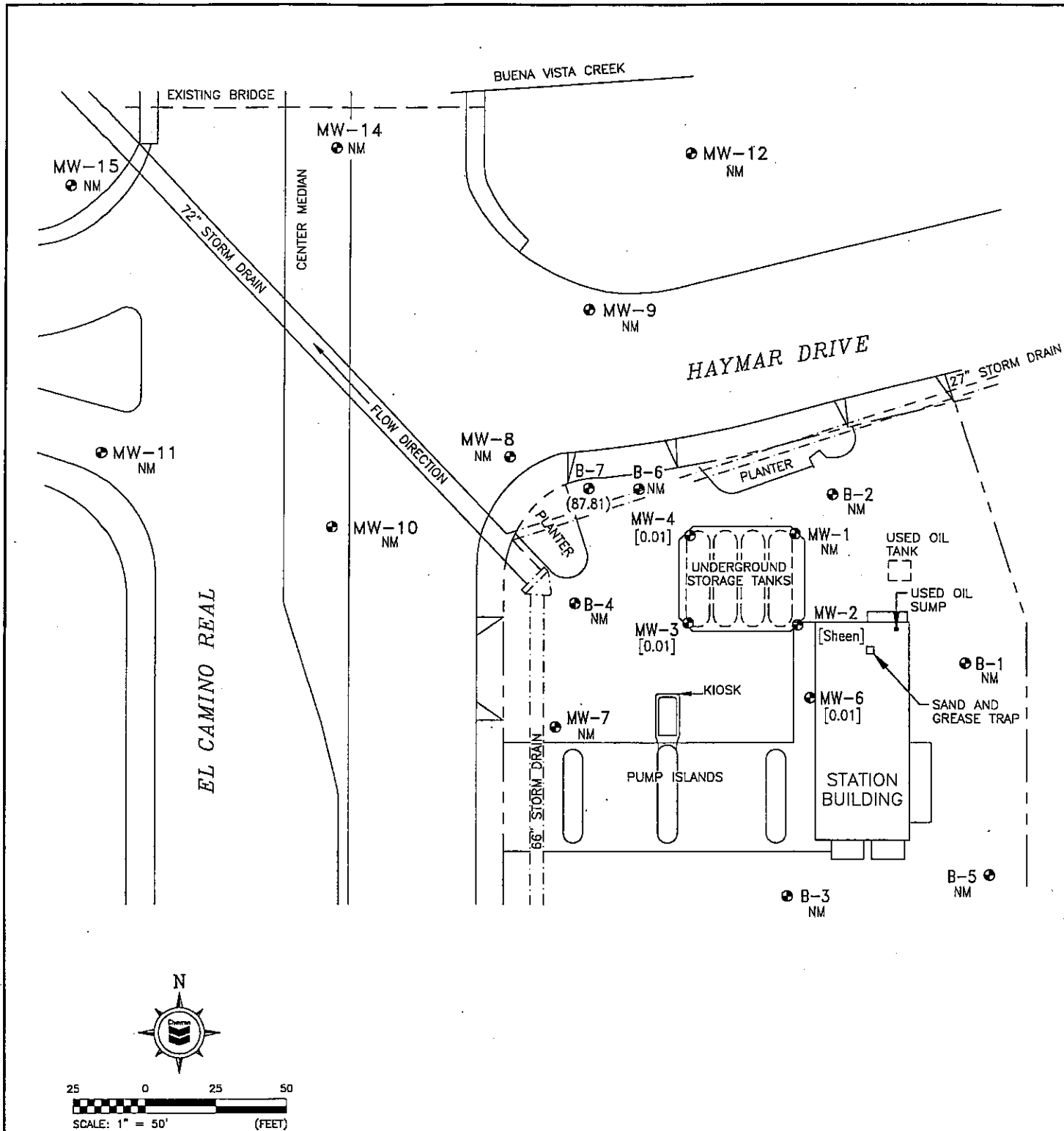
FIGURE No. 2

PROJECT No. CHEVRON R7.3

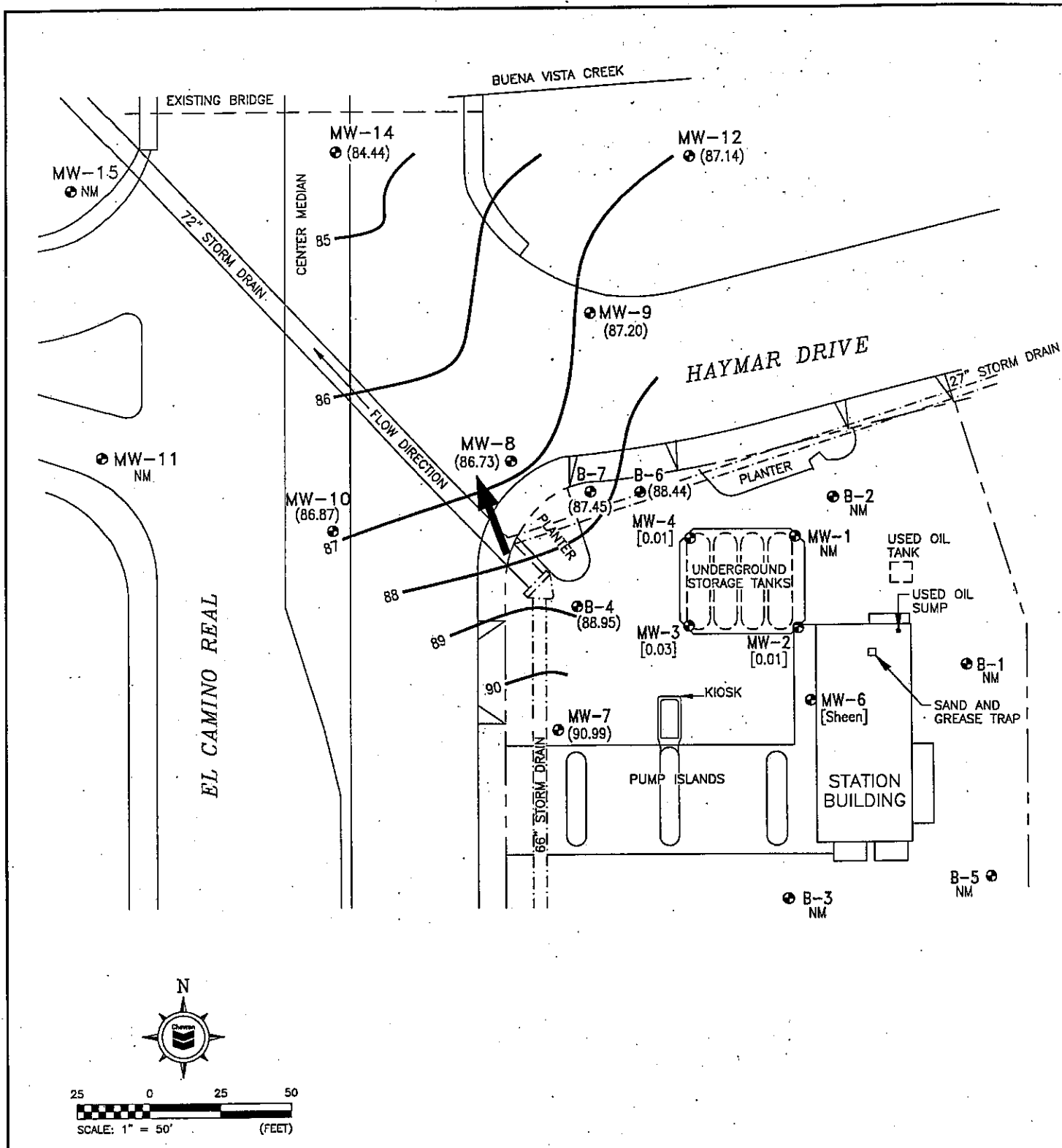
▼ BBC ENVIRONMENTAL, INC.



LEGEND		GROUNDWATER GRADIENT MAP	
● B-7 (87.73)	MONITORING WELL. GROUNDWATER ELEVATION IN FEET ABOVE AN ARBITRARY DATUM, MEASURED 5/18/01.	CHEVRON STATION No. 9-1312 2500 EL CAMINO REAL CARLSBAD, CALIFORNIA	
— 86.0	ESTIMATED CONTOURS OF EQUAL GROUNDWATER ELEVATION.	FIGURE No. 2	PROJECT No. CHEVRON R7.3
NM	NOT MEASURED.	BBC ENVIRONMENTAL, INC.	
[Sheen]	FREE PRODUCT [Feet].		
➔	ESTIMATED GROUNDWATER FLOW DIRECTION.		



LEGEND		GROUNDWATER GRADIENT MAP	
● B-7 (87.81)	MONITORING WELL. GROUNDWATER ELEVATION IN FEET ABOVE AN ARBITRARY DATUM, MEASURED 2/6/01.	CHEVRON STATION No. 9-1312 2500 EL CAMINO REAL CARLSBAD, CALIFORNIA	
— 87	ESTIMATED CONTOURS OF EQUAL GROUNDWATER ELEVATION.	FIGURE No. 2	PROJECT No. CHEVRON R7.3
NM [0.01]	NOT MONITORED. FREE PRODUCT [Feet].	▼ BBC ENVIRONMENTAL, INC.	
➔	ESTIMATED GROUNDWATER FLOW DIRECTION.		



LEGEND

- B-7 (87.45) MONITORING WELL. GROUNDWATER ELEVATION IN FEET ABOVE AN ARBITRARY DATUM, MEASURED 10/18/00.
- 90 ESTIMATED CONTOURS OF EQUAL GROUNDWATER ELEVATION.
- NM [0.01] NOT MONITORED. FREE PRODUCT [Feet].
- ➔ ESTIMATED GROUNDWATER FLOW DIRECTION.

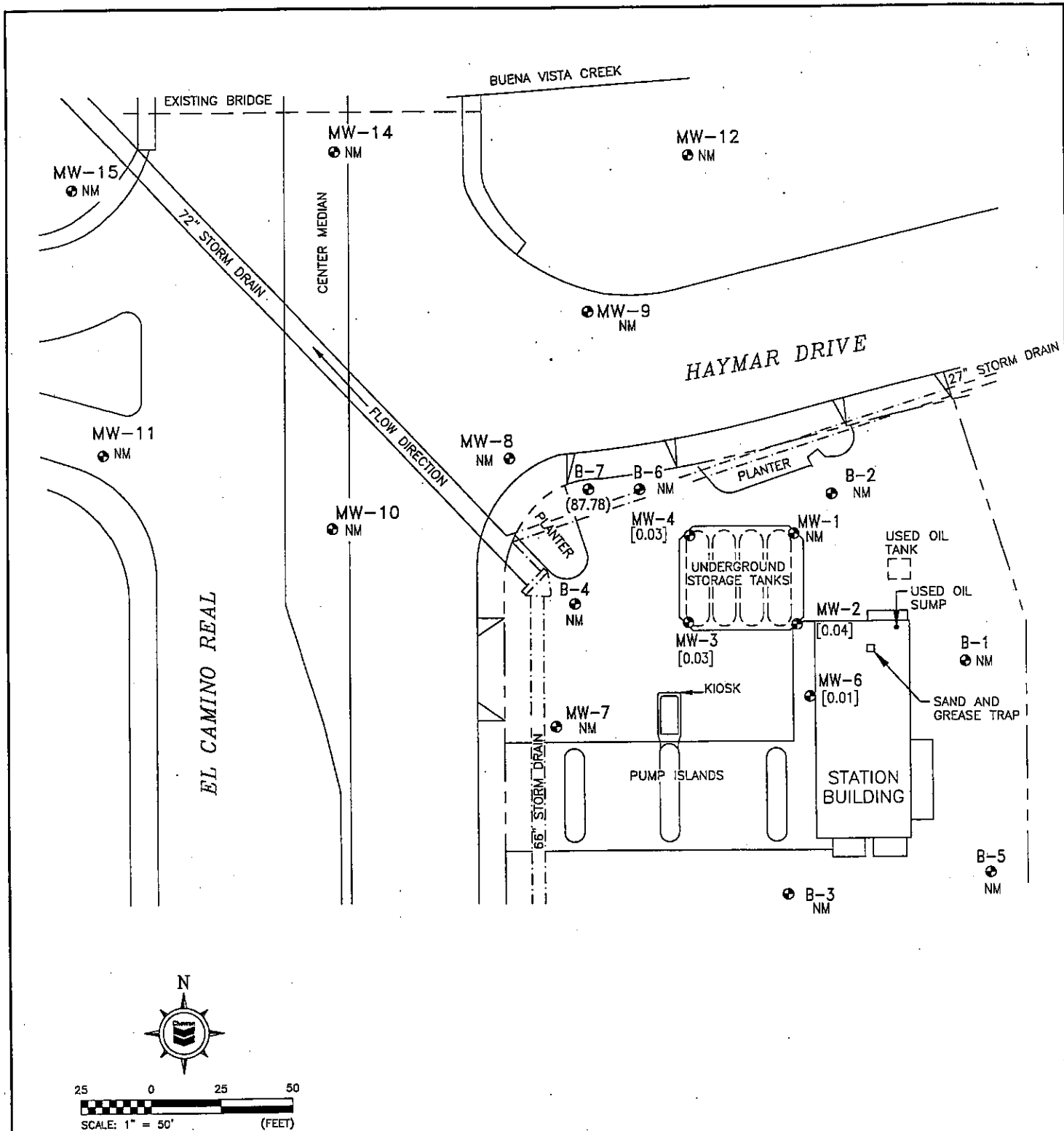
GROUNDWATER GRADIENT MAP

CHEVRON STATION No. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

FIGURE No. 2

PROJECT No. CHEVRON R7.3

▼ BBC ENVIRONMENTAL, INC.



LEGEND

● B-7
(87.78)

MONITORING WELL.
GROUNDWATER ELEVATION
IN FEET ABOVE AN ARBITRARY
DATUM, MEASURED 7/11/00.

— 92

ESTIMATED CONTOURS OF EQUAL
GROUNDWATER ELEVATION.

NM
[0.04]

NOT MEASURED.
FREE PRODUCT [Feet].



ESTIMATED GROUNDWATER
FLOW DIRECTION.

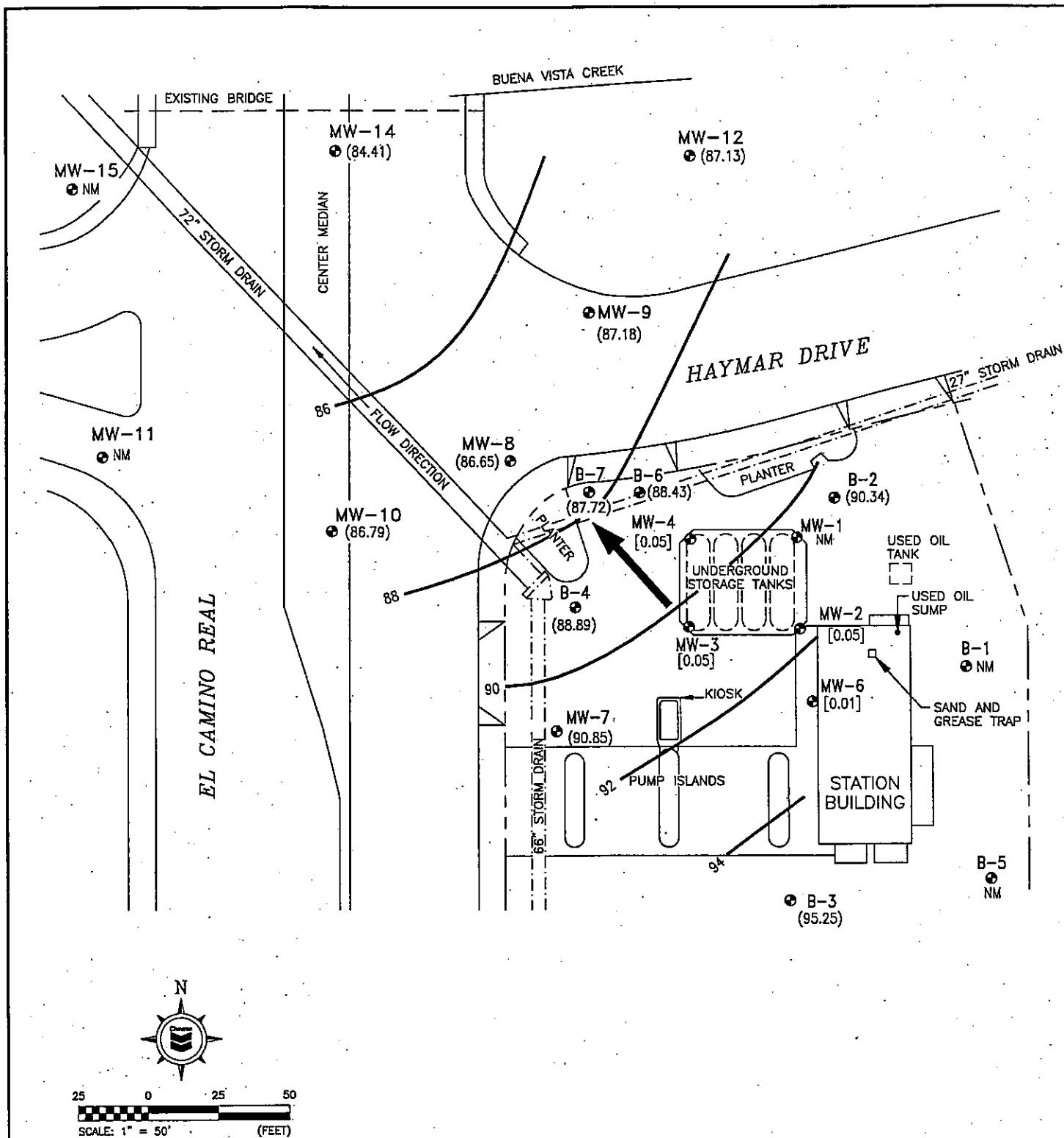
GROUNDWATER GRADIENT MAP

CHEVRON STATION No. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

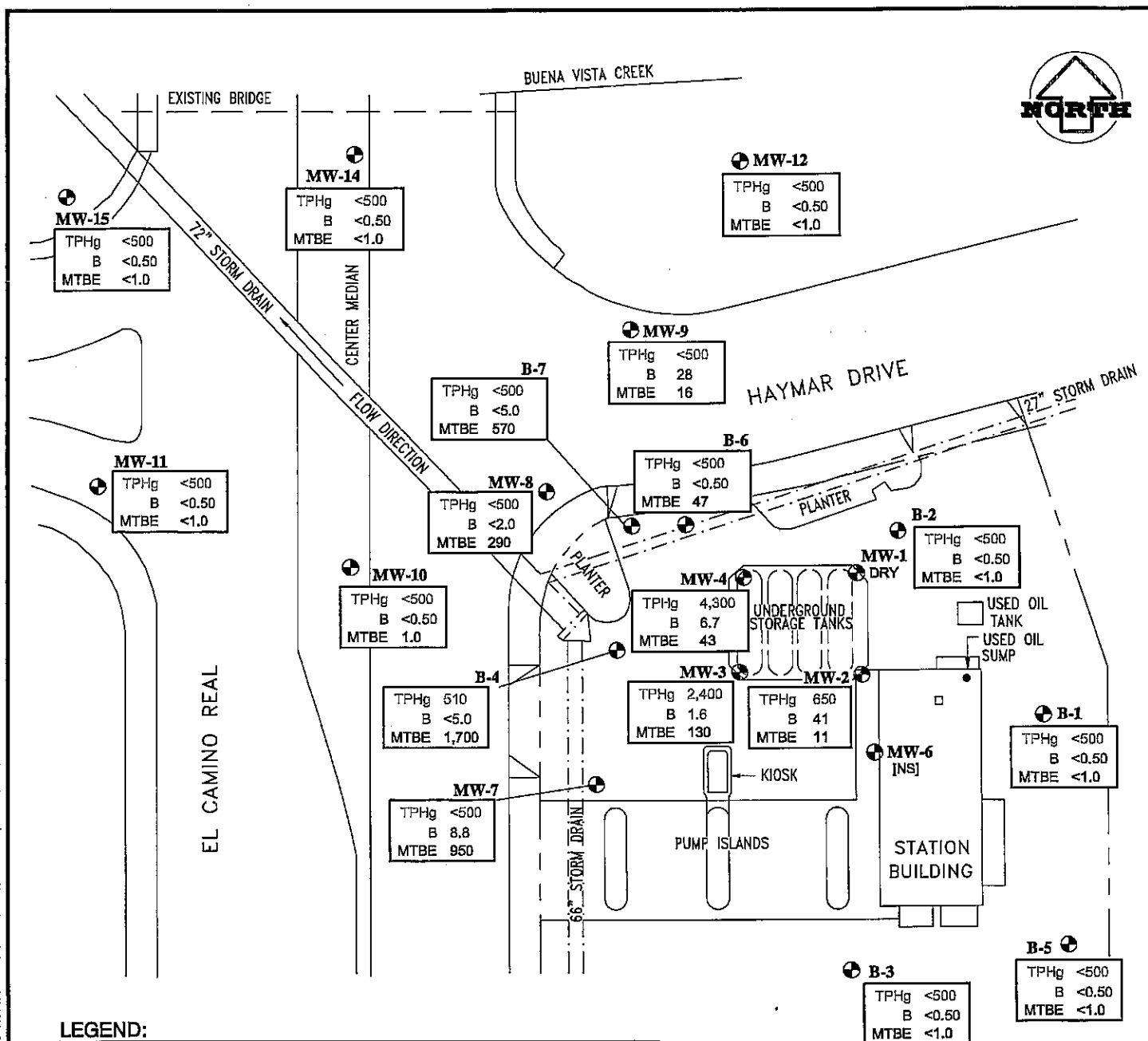
FIGURE No. 2

PROJECT No. CHEVRON R7.2

▼ BBC ENVIRONMENTAL, INC.



LEGEND		GROUNDWATER GRADIENT MAP	
<p>● B-7 (87.72)</p> <p>— 86</p> <p>NM [0.05]</p> <p>➔</p>	MONITORING WELL.	CHEVRON STATION No. 9-1312	
	GROUNDWATER ELEVATION IN FEET ABOVE AN ARBITRARY DATUM, MEASURED 4/13/00.	2500 EL CAMINO REAL	
	ESTIMATED CONTOURS OF EQUAL GROUNDWATER ELEVATION.	CARLSBAD, CALIFORNIA	
	NOT MEASURED.	FIGURE No. 2	PROJECT No. CHEVRON R7.2
	FREE PRODUCT [Feet].	▼ BBC ENVIRONMENTAL, INC.	
	ESTIMATED GROUNDWATER FLOW DIRECTION.		



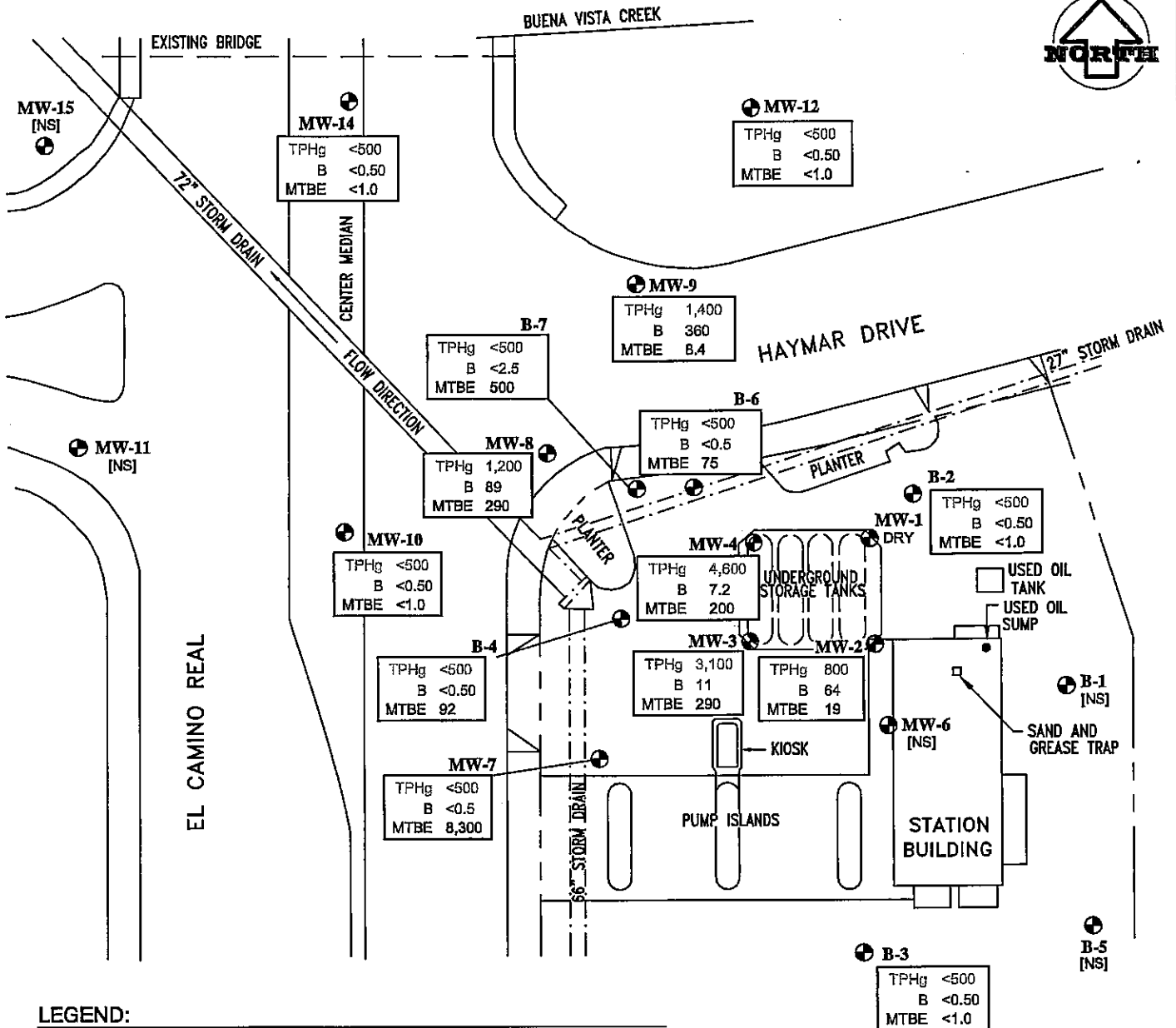
DRAWN BY: PD
CHECKED:
APPROVED:
DATE: 7/26/04
JOB No.: 08CH.41312.04
CAD FILE: 91312HCM4-04

PREPARED BY:

SECOR
2655 Camino del Rio North, Suite 302
San Diego, California

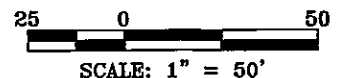
PREPARED FOR:
CHEVRON STATION NO. 9-1312
2500 El Camino Real
Carlsbad, California

FIGURE: 5
HYDROCARBON CONSTITUENT MAP
APRIL 22, 2004



NOTES:

SITE PLAN ADAPTED FROM
BBC ENVIRONMENTAL, INC. FIGURE.



DRAWN BY: RJO
CHECKED: _____
APPROVED: _____
DATE: 1/6/03
JOB No.: 08CH.41312.03
CAD FILE: 91312HCM07-03

PREPARED BY:

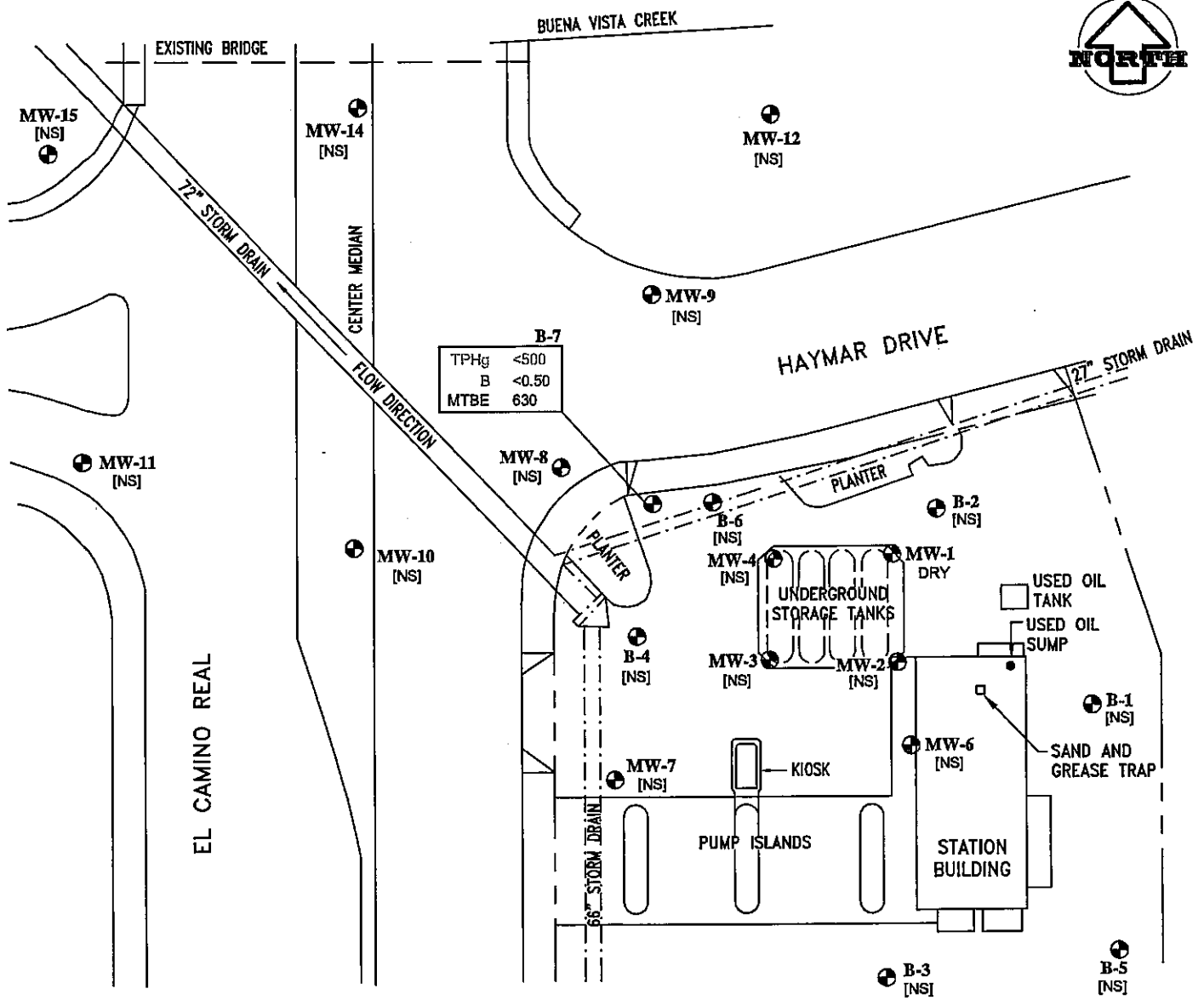
SECOR
2655 Camino del Rio North, Suite 302
San Diego, California

PREPARED FOR:

CHEVRON STATION NO. 9-1312
2500 El Camino Real
Carlsbad, California

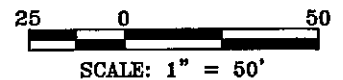
FIGURE: 5
HYDROCARBON CONSTITUENT MAP
OCTOBER 22, 2003

K:\ALLPROJECTS\2003\DWG\SECOR\2003\19-1312-2K\191312HCM07-03.DWG MODIFIED BY LHUNTER ON FEB 02, 2004 - 11:48



NOTES:

SITE PLAN ADAPTED FROM
BBC ENVIRONMENTAL, INC. FIGURE.



DRAWN BY: RJO
CHECKED:
APPROVED:
DATE: 1/6/03
JOB No.: 08CH.41312.03
CAD FILE: 91312HCM07-03

PREPARED BY:

SECOR
2655 Camino del Rio North, Suite 302
San Diego, California

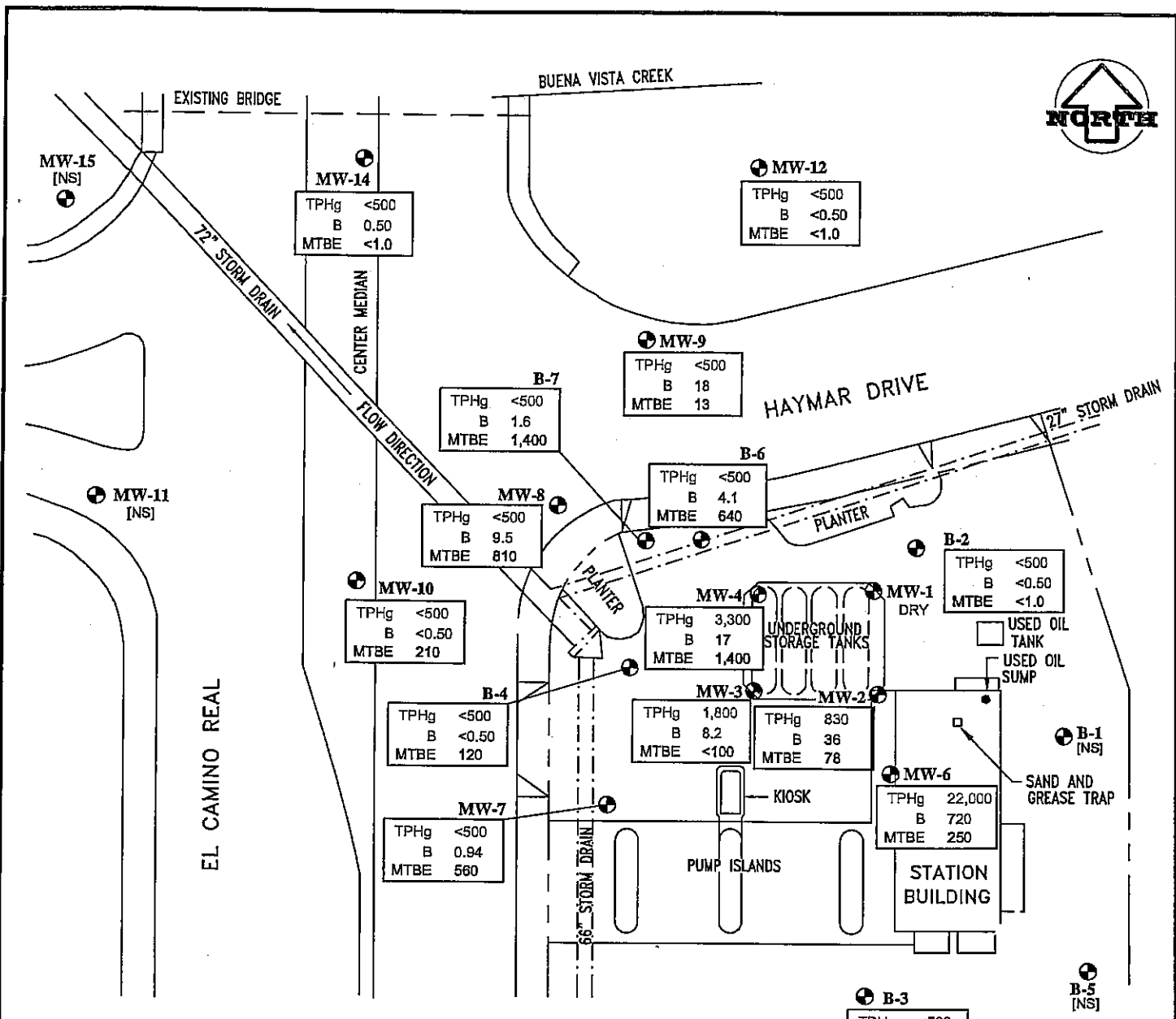
PREPARED FOR:

CHEVRON STATION NO. 9-1312
2500 El Camino Real
Carlsbad, California

FIGURE: 3

**HYDROCARBON CONSTITUENT MAP
JULY 2, 2003**

K:\ALLPROJECTS\2003\09\03\2\HCM04-03.DWG MODIFIED BY LHUNTER ON SEP 02, 2003 - 15:32



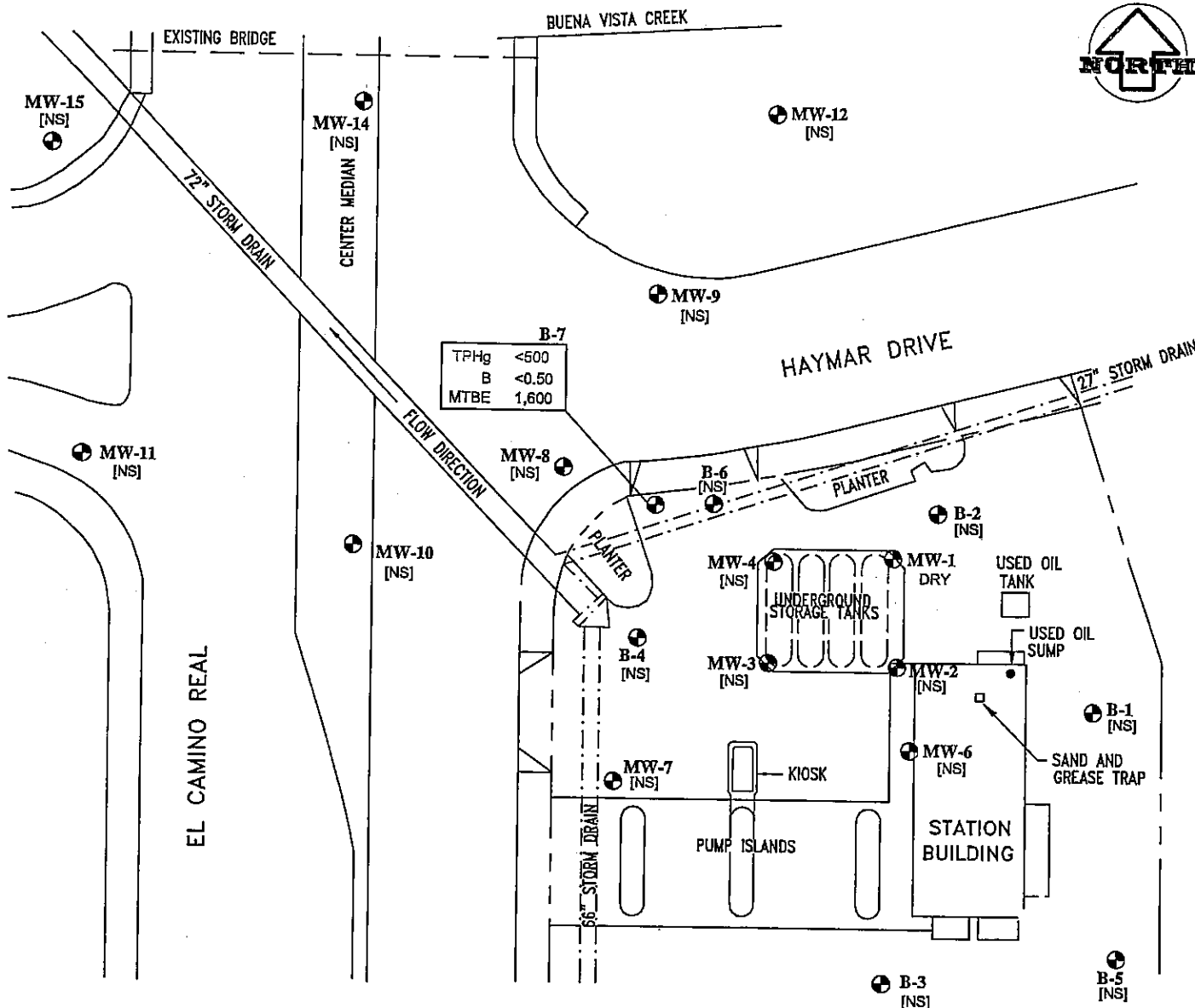
NOTES:

SITE PLAN ADAPTED FROM BBC ENVIRONMENTAL, INC. FIGURE.

SCALE: 1" = 50'

DRAWN BY: LGH CHECKED: APPROVED: DATE: 9/02/03 JOB No.: 08CH.41312.03 CAD FILE: 91312HCM04-03	PREPARED BY: SECOR 2655 Camino del Rio North, Suite 302 San Diego, California	PREPARED FOR: CHEVRON STATION NO. 9-1312 2500 EL CAMINO REAL CARLSBAD, CALIFORNIA	FIGURE: 5 HYDROCARBON CONSTITUENT MAP - APRIL 2, 2003
--	--	---	--

K:\PROJECTS\2003\DIVES\CHEVRON 2003\9-1312-2K3191312HCM01-03.DWG MODIFIED BY LHUNTER ON AUG 30, 2003 - 12:36



LEGEND:

MW-2 GROUNDWATER MONITORING WELL

TPHg	<500
B	<0.50
MTBE	1,600

TPHg/BENZENE/MTBE CONCENTRATIONS IN GROUNDWATER
SAMPLES COLLECTED ON MARCH 28, 2003. CONCENTRATIONS
REPORTED IN MICROGRAMS PER LITER ($\mu\text{g/L}$)

TPHg TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
B BENZENE
MTBE METHYL TERT-BUTYL ETHER
< BELOW LABORATORY REPORTING LIMIT
[NS] NOT SAMPLED

NOTES:

SITE PLAN ADAPTED FROM
BBC ENVIRONMENTAL, INC. FIGURE.

25 0 50

SCALE: 1" = 50'

DRAWN BY: LGH
CHECKED:
APPROVED:
DATE: 9/02/03
JOB No.: 08CH.41312.03
CAD FILE: 91312HCM01-03

PREPARED BY:



SECOR

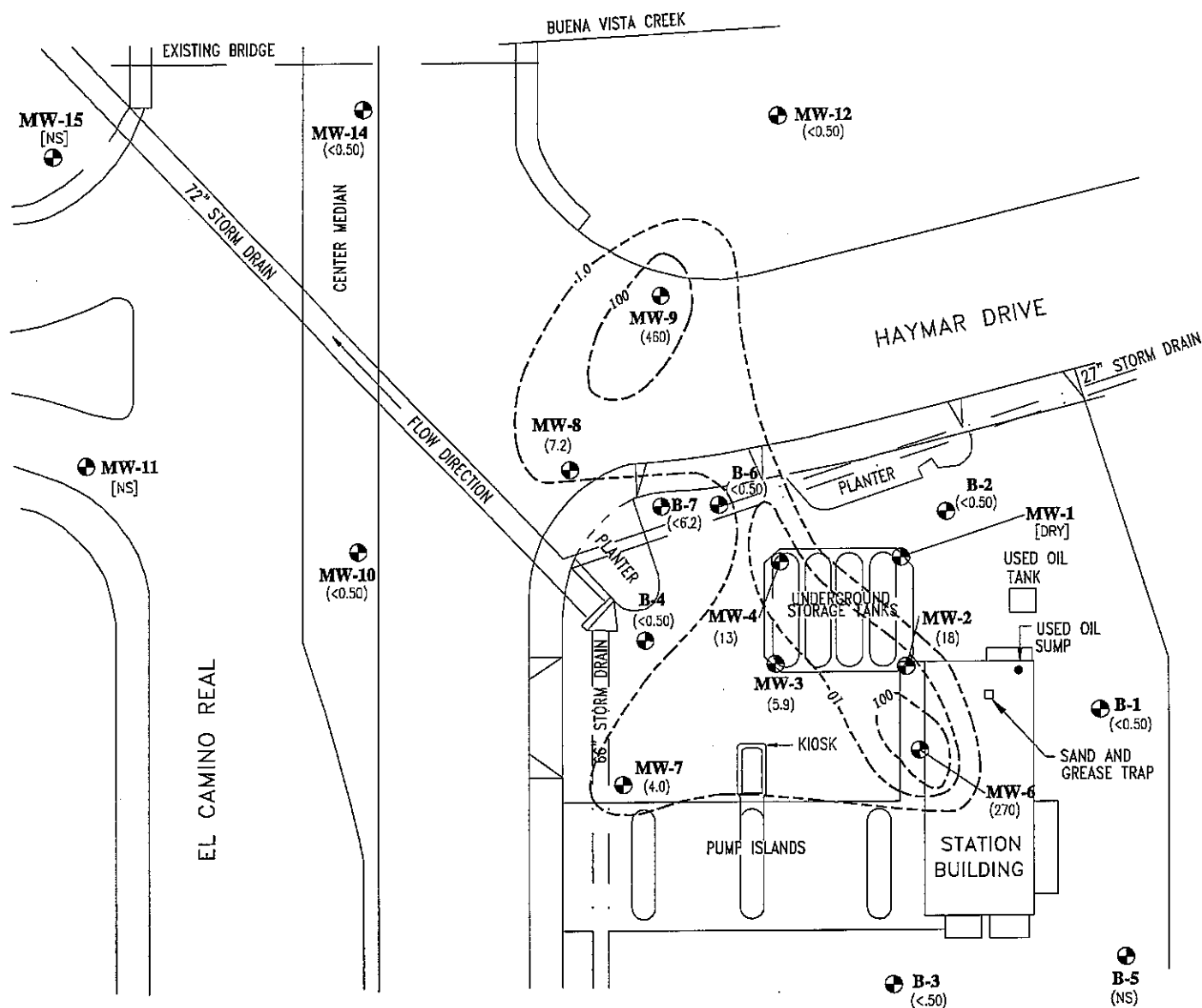
2655 Camino del Rio North, Suite 302
San Diego, California

PREPARED FOR:

CHEVRON STATION NO. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

FIGURE: 3

**HYDROCARBON CONSTITUENT
MAP - JANUARY 13, 2003**



LEGEND:

- MW-2** **GROUNDWATER MONITORING WELL**
- <0.50** **BENZENE CONCENTRATIONS IN MICROGRAMS PER LITER (ug/L)**
- [NS]** **NOT SAMPLED**



25 0 50
SCALE: 1" = 50'

SECOR
International Incorporated
2655 CAMINO DEL RIO N., SUITE 302
SAN DIEGO, CA. 92108

PROJECT: 08CH.51312.00 DATE: 01/21/03

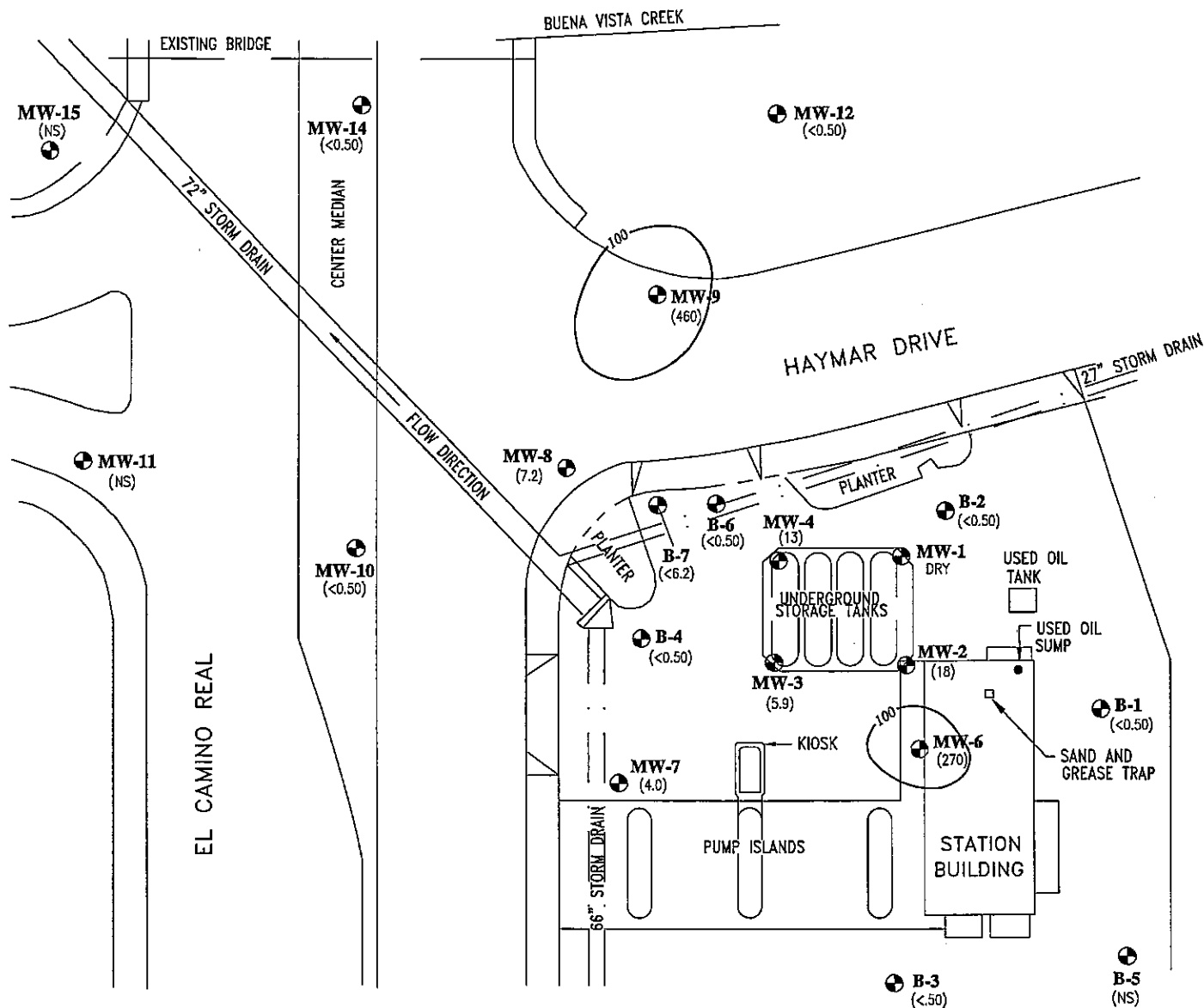
NOTES:

SITE PLAN ADAPTED FROM
BBC ENVIRONMENTAL, INC. FIGURE.

FIGURE 9

**DISSOLVED BENZENE
ISOCONCENTRATION MAP -
NOVEMBER 20, 2002**

CHEVRON STATION NO. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA



NOTES:

SITE PLAN ADAPTED FROM
BBC ENVIRONMENTAL, INC. FIGURE.

FIGURE 3

DISSOLVED BENZENE
ISOCONCENTRATION MAP -
NOV. 20, 2002

CHEVRON STATION NO. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

SECOR
International Incorporated
2655 CAMINO DEL RIO N., SUITE 302
SAN DIEGO, CA. 92108

PROJECT: 08CH.51312.00 DATE: 01/21/03

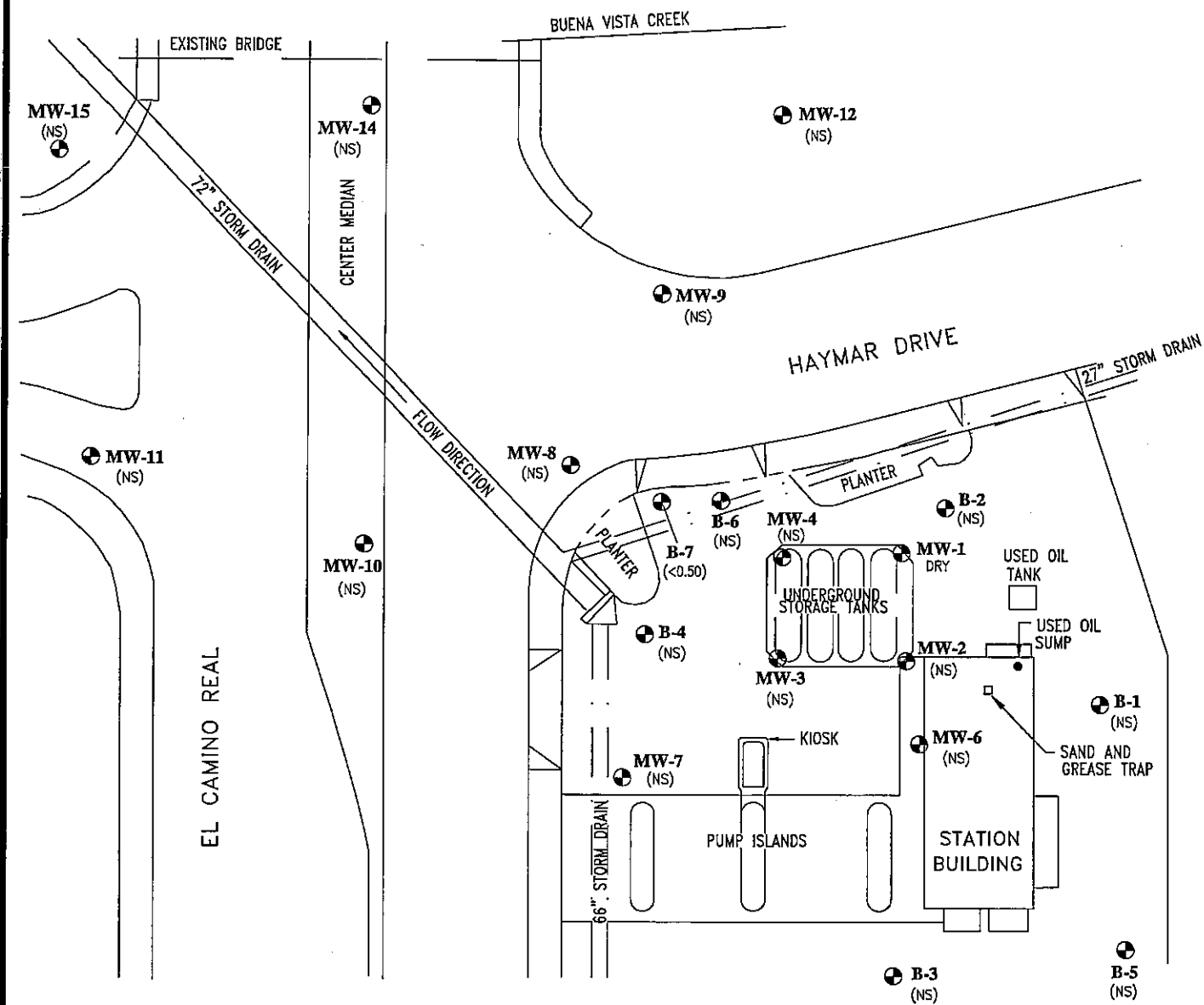
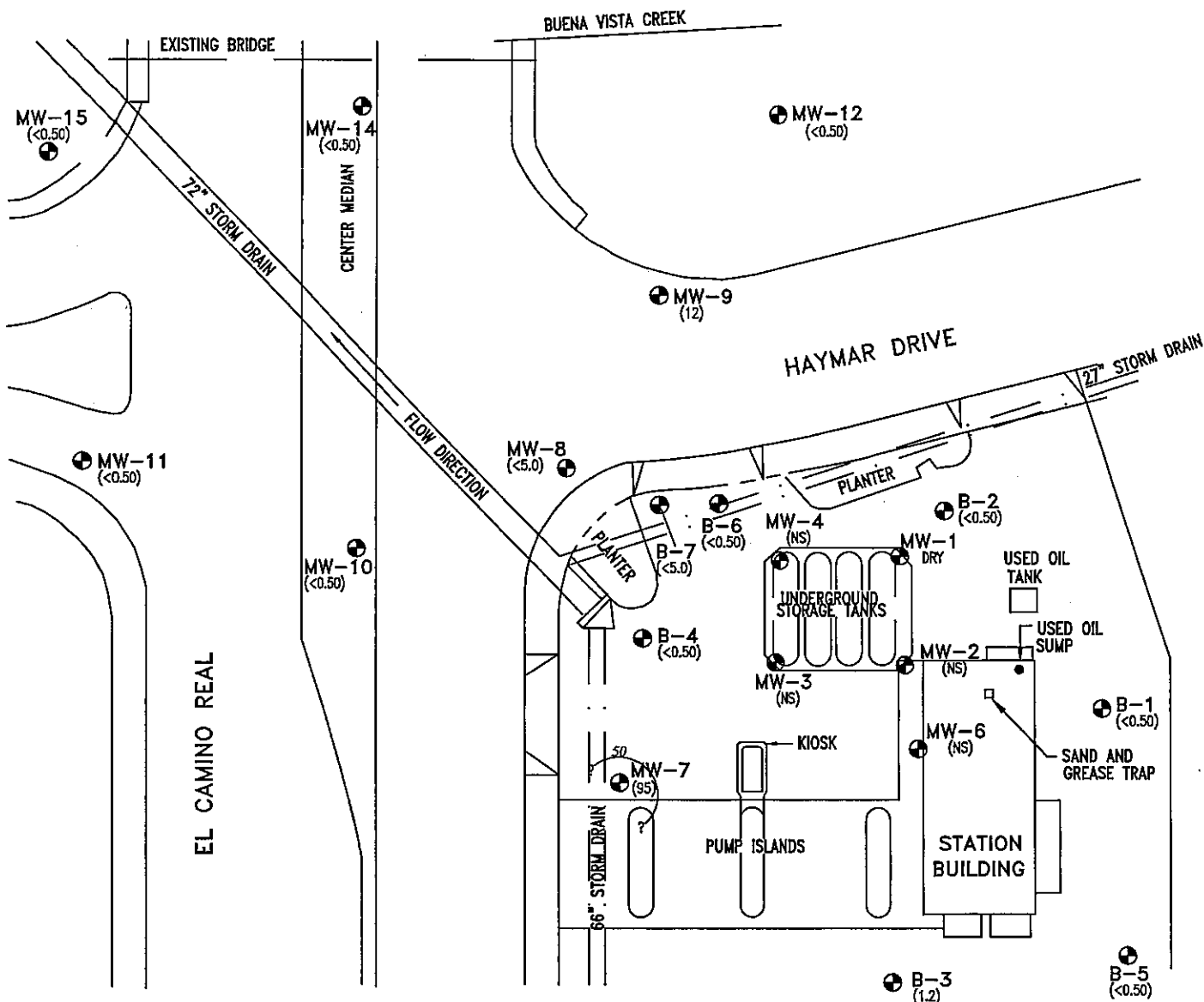


FIGURE 3
DISSOLVED BENZENE
ISOCONCENTRATION MAP -
JULY 25, 2002
CHEVRON STATION NO. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

SECOR
 International Incorporated
 2655 CAMINO DEL RIO N., SUITE 302
 SAN DIEGO, CA. 92108

K:\...2002dwgs\Chevron2002\9-1312-2K2\9-131208ENZ7-02.DWG

PROJECT: 08CH.51312.00 DATE: 10/24/02



SECOR
International Incorporated
2655 CAMINO DEL RIO N., SUITE 302
SAN DIEGO, CA. 92108

NOTES:

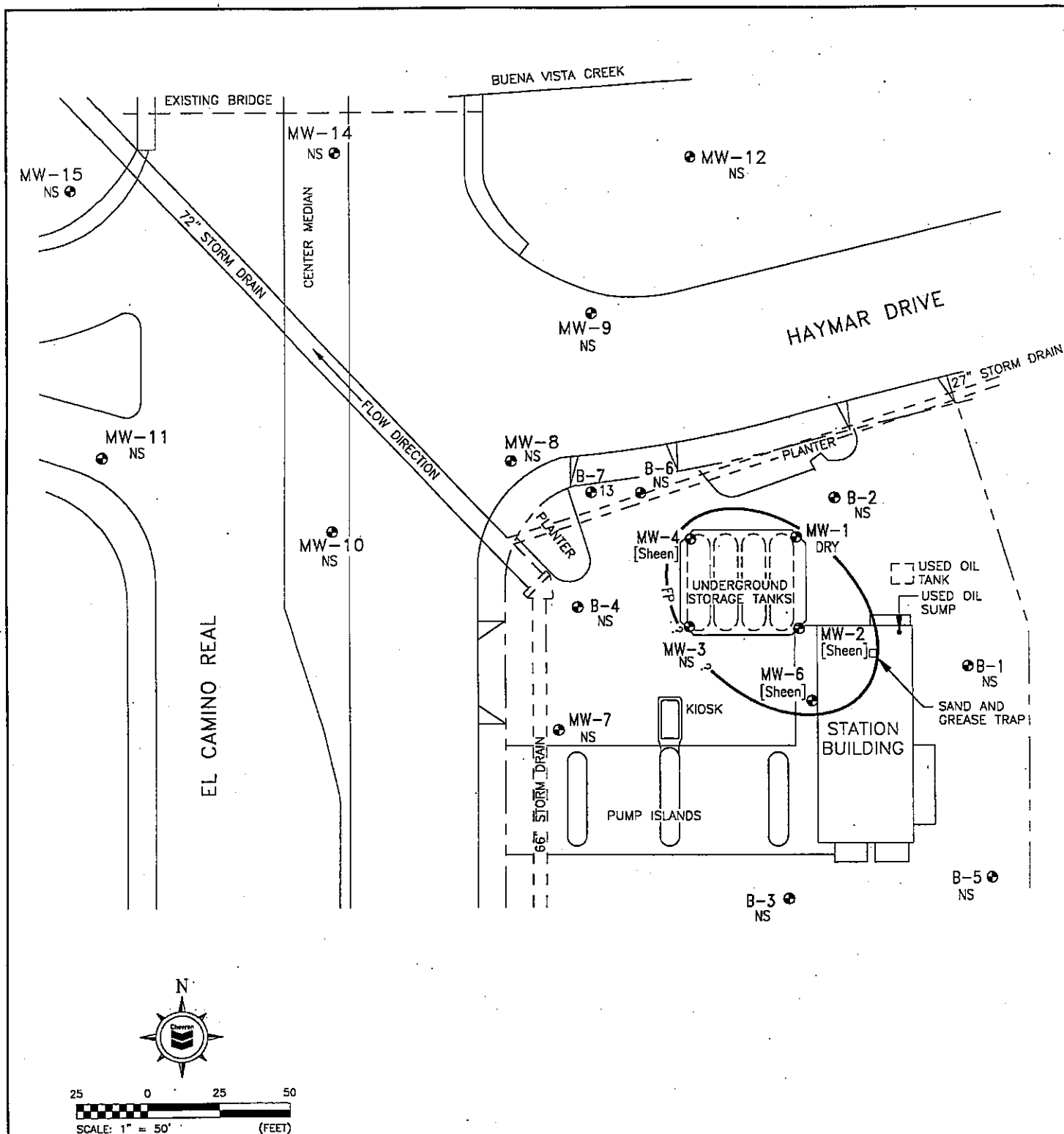
SITE PLAN ADAPTED FROM
BBC ENVIRONMENTAL, INC. FIGURE.

FIGURE 3
DISSOLVED BENZENE
ISOCONCENTRATION MAP -
MAY 21, 2002

CHEVRON STATION NO. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

..2002dwgs\Chevron2002\9-1312-2K2\9-1312BENZ5-02.DWG

PROJECT: 08CH.51312.00 DATE: 8/22/02



LEGEND

● B-7
13

MONITORING WELL
BENZENE CONCENTRATIONS
IN GROUNDWATER (ug/l)
SAMPLED 1/28/02.

[Sheen]

FREE PRODUCT [Feet].

NS

NOT SAMPLED.

—1.0

ESTIMATED CONTOURS OF
EQUAL BENZENE CONCENTRATIONS
IN GROUNDWATER (ug/l).

BENZENE IN GROUNDWATER

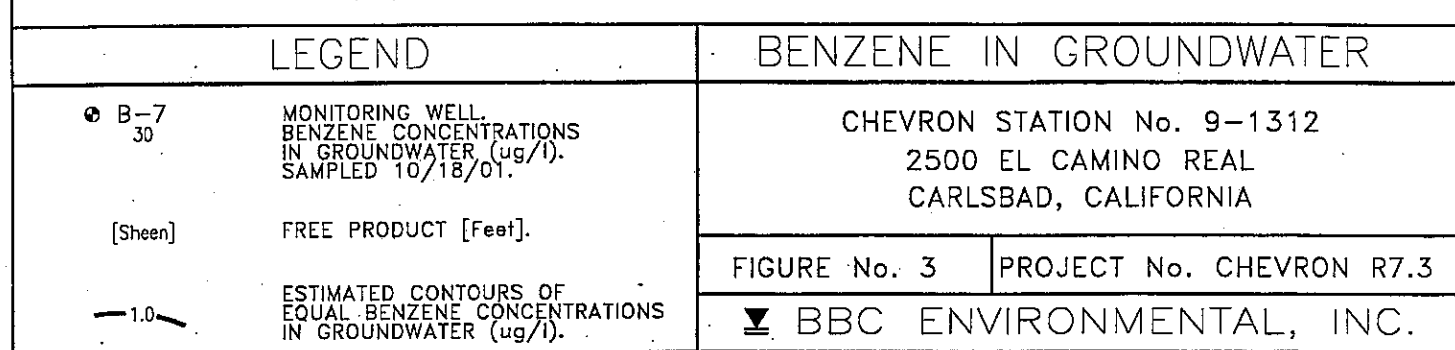
CHEVRON STATION No. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

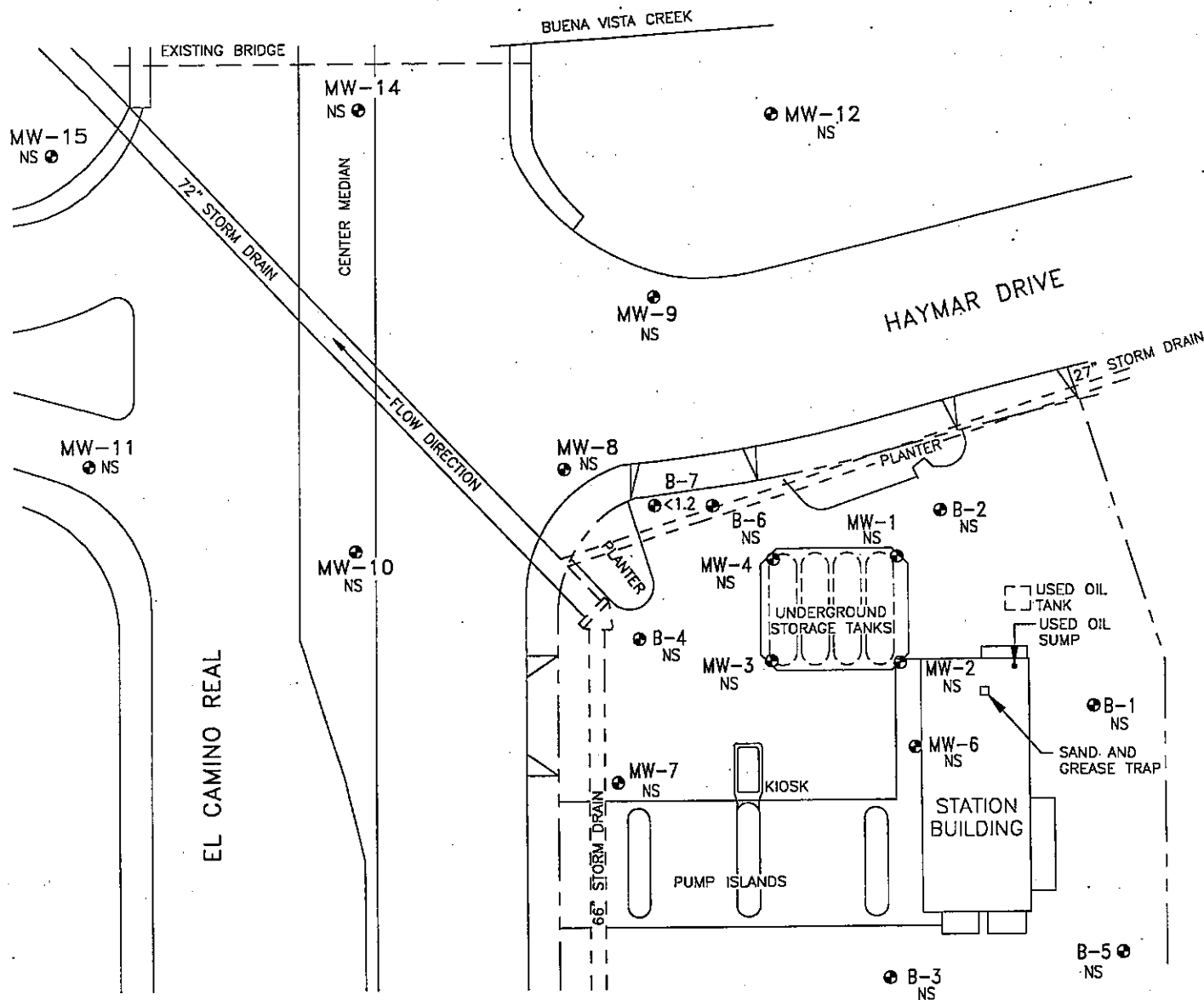
FIGURE No. 3

PROJECT No. CHEVRON R7.4



BBC ENVIRONMENTAL, INC.





LEGEND

● B-7
<1.2

MONITORING WELL,
BENZENE CONCENTRATIONS
IN GROUNDWATER (ug/l).
SAMPLED 7/9/01

NS

NOT SAMPLED.

—1.0—

ESTIMATED CONTOURS OF
EQUAL BENZENE CONCENTRATIONS
IN GROUNDWATER (ug/l).

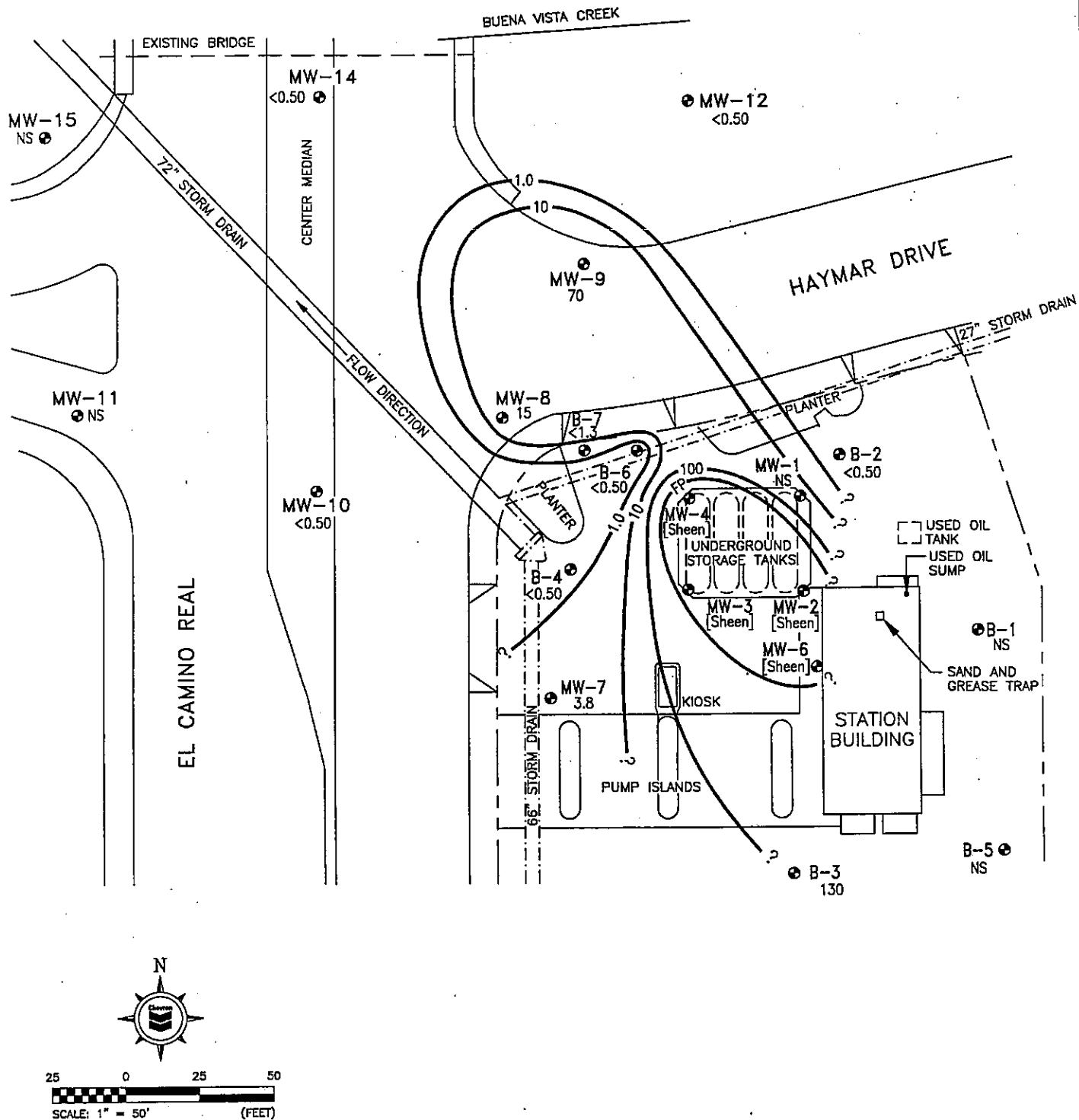
BENZENE IN GROUNDWATER

CHEVRON STATION No. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

FIGURE No. 3

PROJECT No. CHEVRON R7.3

▼ BBC ENVIRONMENTAL, INC.



LEGEND

● B-7
<1.3

[Sheen]
NS

—1.0—

MONITORING WELL.
BENZENE CONCENTRATIONS
IN GROUNDWATER (ug/l)
SAMPLED 5/18/01.

FREE PRODUCT [Feet].
NOT SAMPLED.

ESTIMATED CONTOURS OF
EQUAL BENZENE CONCENTRATIONS
IN GROUNDWATER (ug/l).

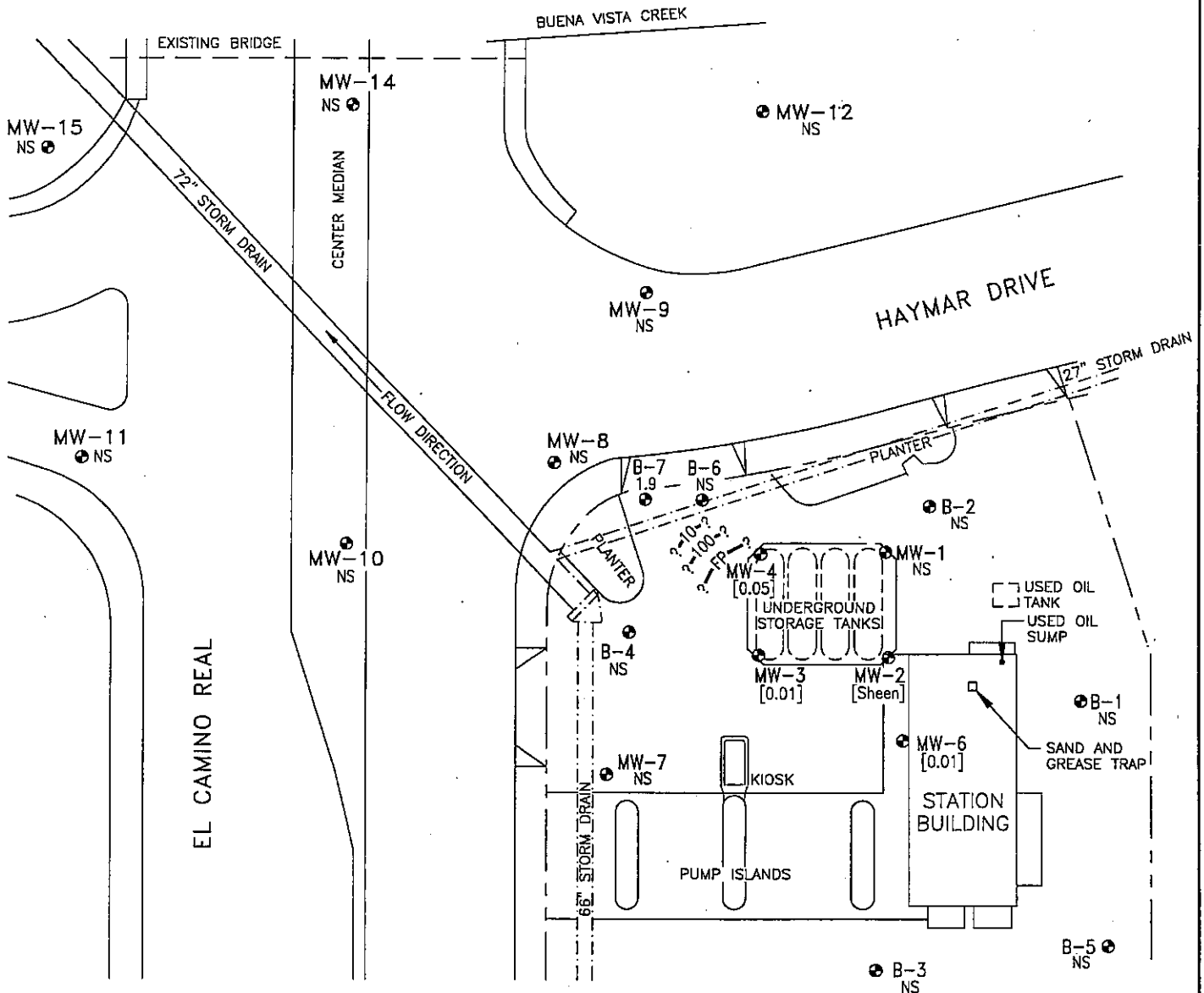
BENZENE IN GROUNDWATER

CHEVRON STATION No. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

FIGURE No. 3

PROJECT No. CHEVRON R7.3

▼ BBC ENVIRONMENTAL, INC.



25 0 25 50
SCALE: 1" = 50' (FEET)

LEGEND

- B-7 1.9 MONITORING WELL. BENZENE CONCENTRATIONS IN GROUNDWATER (ug/l) SAMPLED 2/6/01.
- [0.01] FREE PRODUCT [Feet].
- NS NOT SAMPLED.
- 10 — ESTIMATED CONTOURS OF EQUAL BENZENE CONCENTRATIONS IN GROUNDWATER (ug/l).

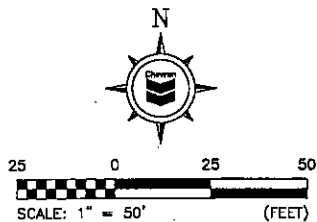
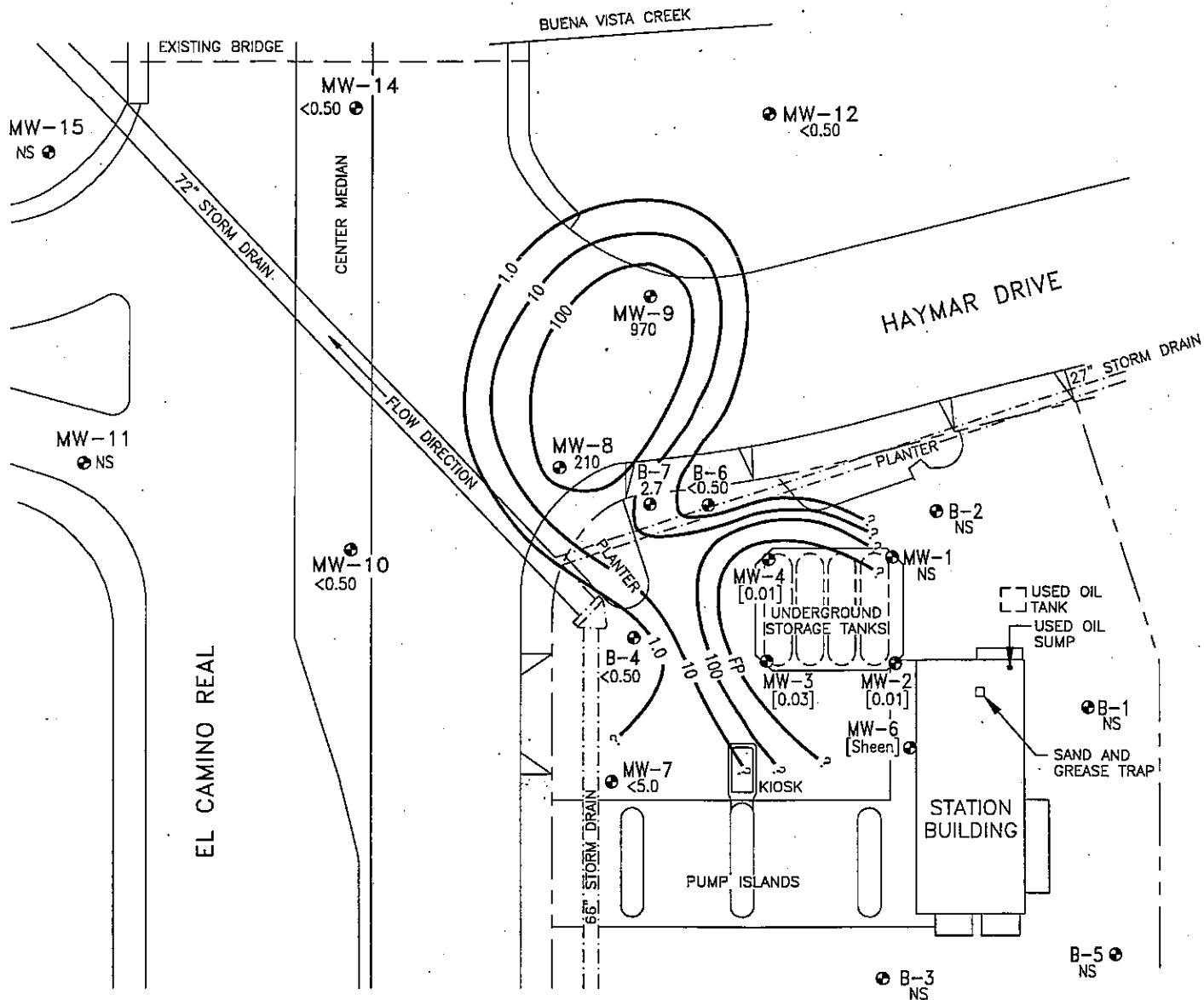
BENZENE IN GROUNDWATER

CHEVRON STATION No. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

FIGURE No. 3

PROJECT No. CHEVRON R7.3

▼ BBC ENVIRONMENTAL, INC.



LEGEND

- B-7
2.7
[0.01]
NS
—1.0—
- MONITORING WELL.
BENZENE CONCENTRATIONS
IN GROUNDWATER (ug/l).
SAMPLED 10/18/00.
- FREE PRODUCT [Feet].
- NOT SAMPLED.
- ESTIMATED CONTOURS OF
EQUAL BENZENE CONCENTRATIONS
IN GROUNDWATER (ug/l).

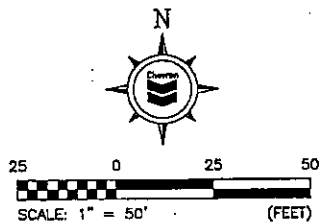
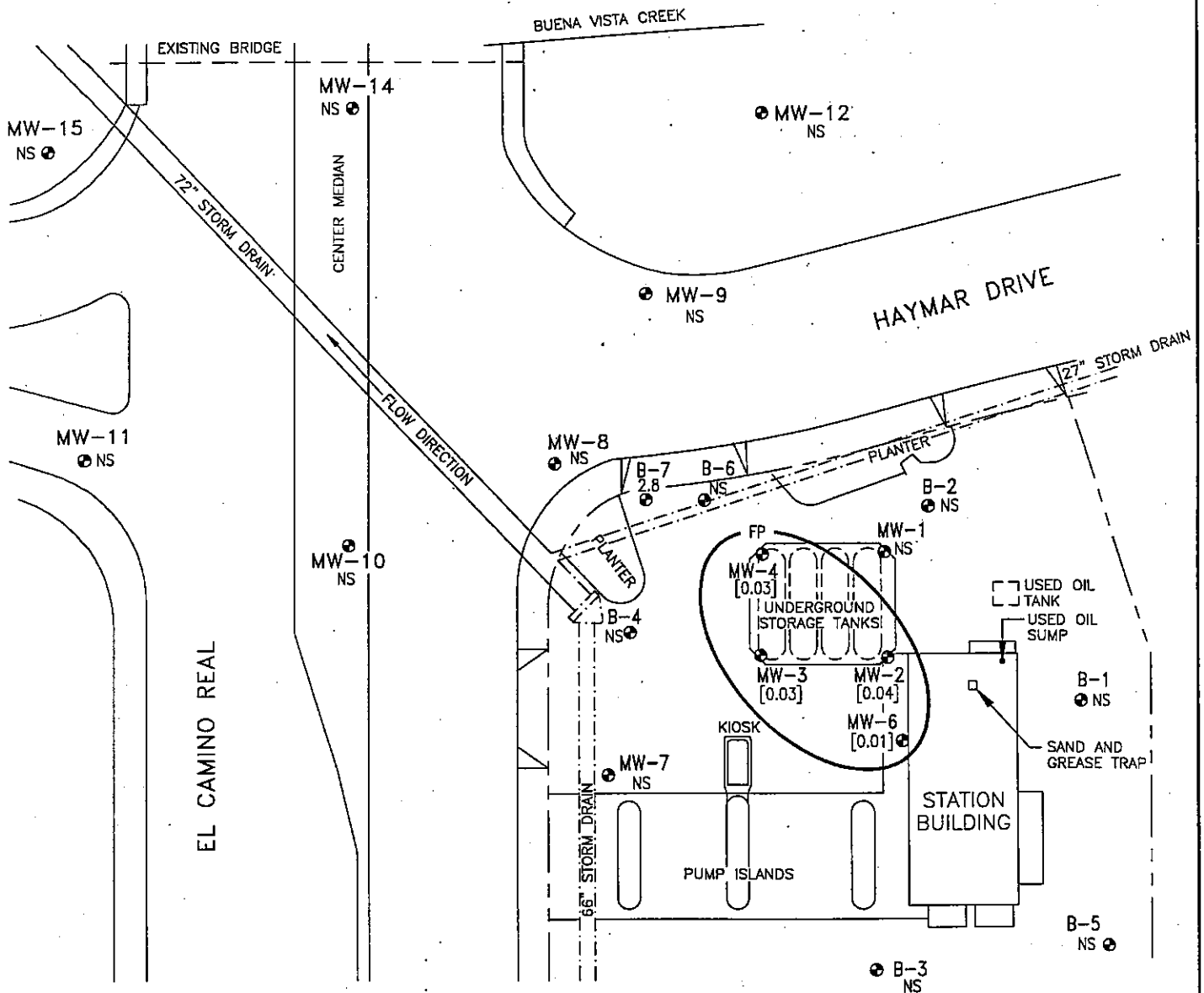
BENZENE IN GROUNDWATER

CHEVRON STATION No. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

FIGURE No. 3

PROJECT No. CHEVRON R7.3

▼ BBC ENVIRONMENTAL, INC.



LEGEND

- B-7 2.8 MONITORING WELL, BENZENE CONCENTRATIONS IN GROUNDWATER (ug/l). SAMPLED 7/11/00
- [0.04] FREE PRODUCT [Feet].
- NS NOT SAMPLED.
- 1.0 — ESTIMATED CONTOURS OF EQUAL BENZENE CONCENTRATIONS IN GROUNDWATER (ug/l).

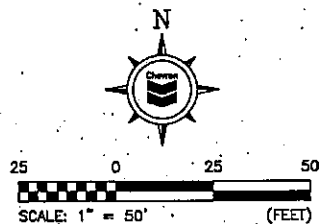
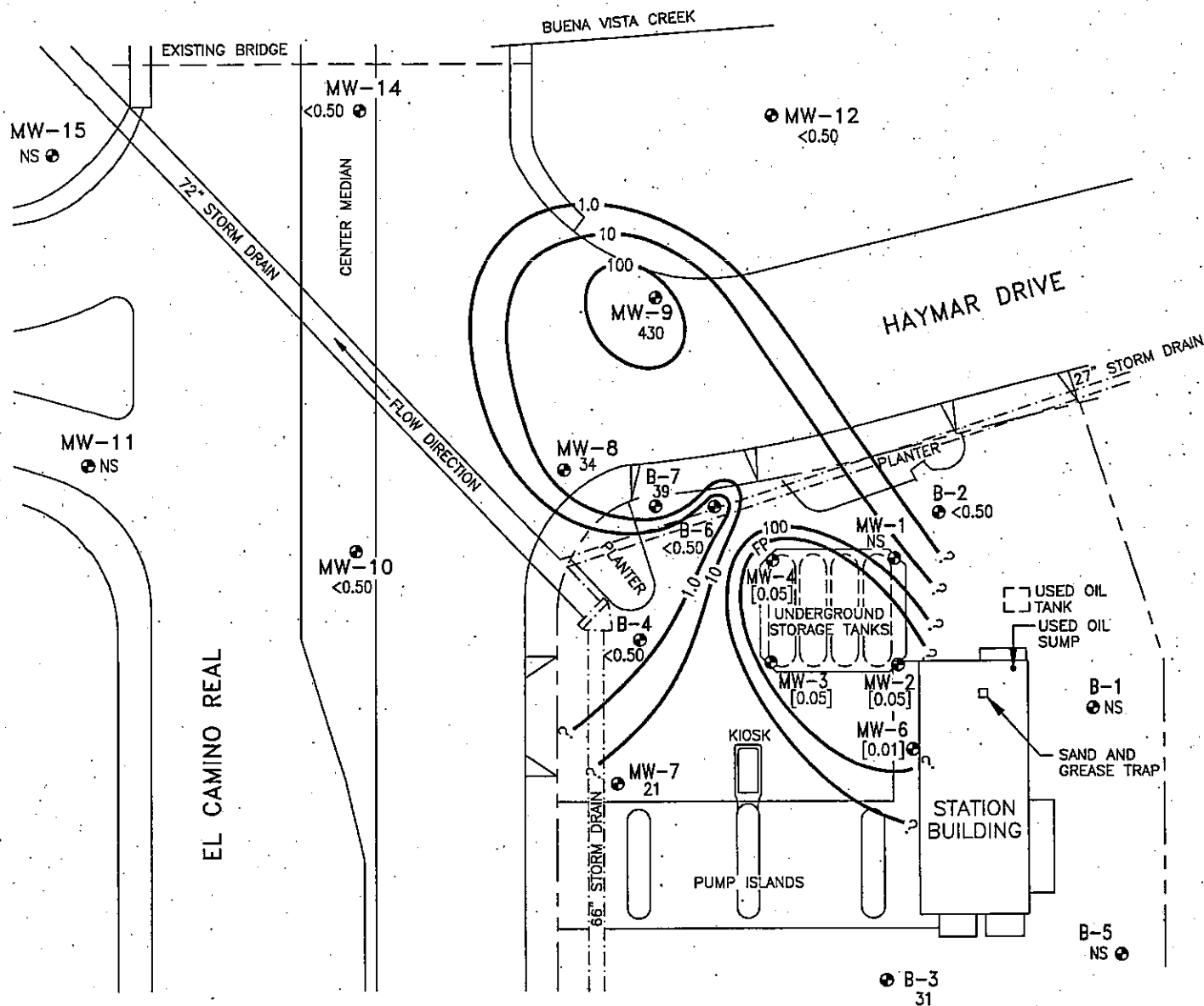
BENZENE IN GROUNDWATER

CHEVRON STATION No. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

FIGURE No. 3

PROJECT No. CHEVRON R7.2

▼ BBC ENVIRONMENTAL, INC.



LEGEND

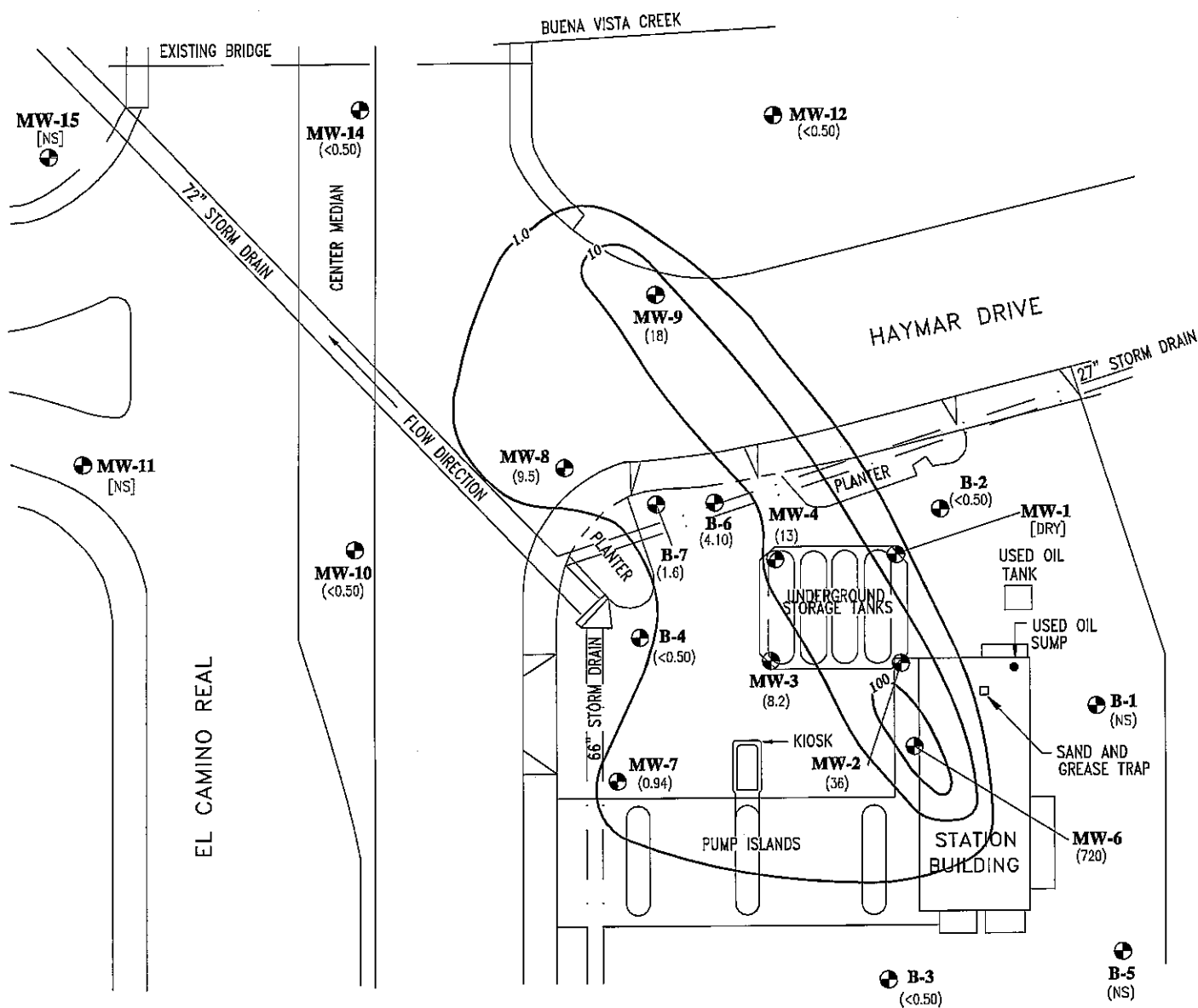
- B-7
39
MONITORING WELL.
BENZENE CONCENTRATIONS
IN GROUNDWATER (ug/l)
SAMPLED 4/13/00.
- [0.05]
NS
FREE PRODUCT [Feet].
NOT SAMPLED.
- 1.0 —
ESTIMATED CONTOURS OF
EQUAL BENZENE CONCENTRATIONS
IN GROUNDWATER (ug/l).

BENZENE IN GROUNDWATER

CHEVRON STATION No. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

FIGURE No. 3 PROJECT No. CHEVRON R7.2

▼ BBC ENVIRONMENTAL, INC.

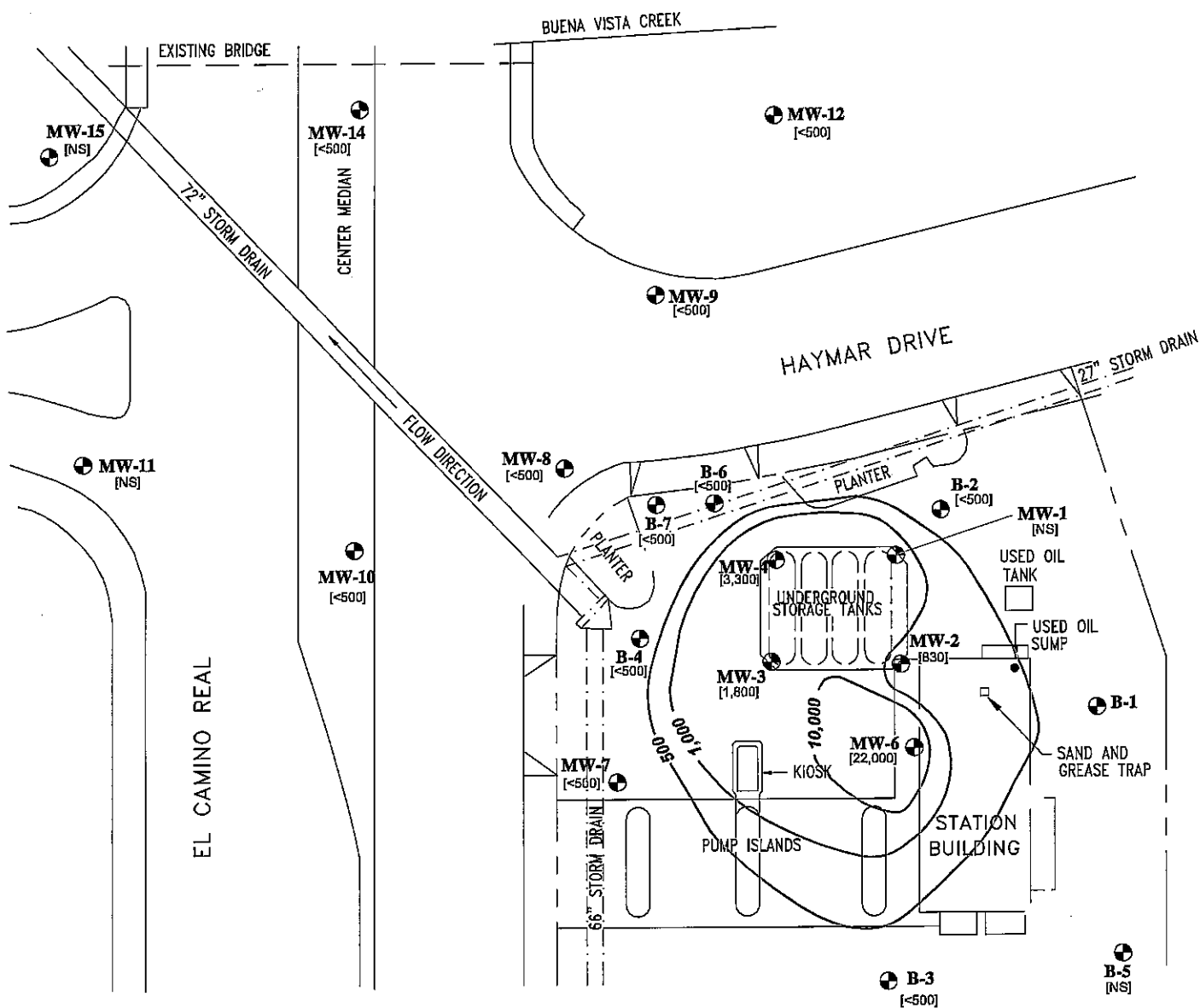


SECOR
International Incorporated
2655 CAMINO DEL RIO N., SUITE 302
SAN DIEGO, CA. 92108

PROJECT: 08CH.51312.00 DATE: 01/21/03

NOTES:

SITE PLAN ADAPTED FROM
BBC ENVIRONMENTAL, INC. FIGURE.



SECOR
International Incorporated
2655 CAMINO DEL RIO N., SUITE 302
SAN DIEGO, CA. 92108

PROJECT: 08CH.51312.00 DATE: 3/10/03

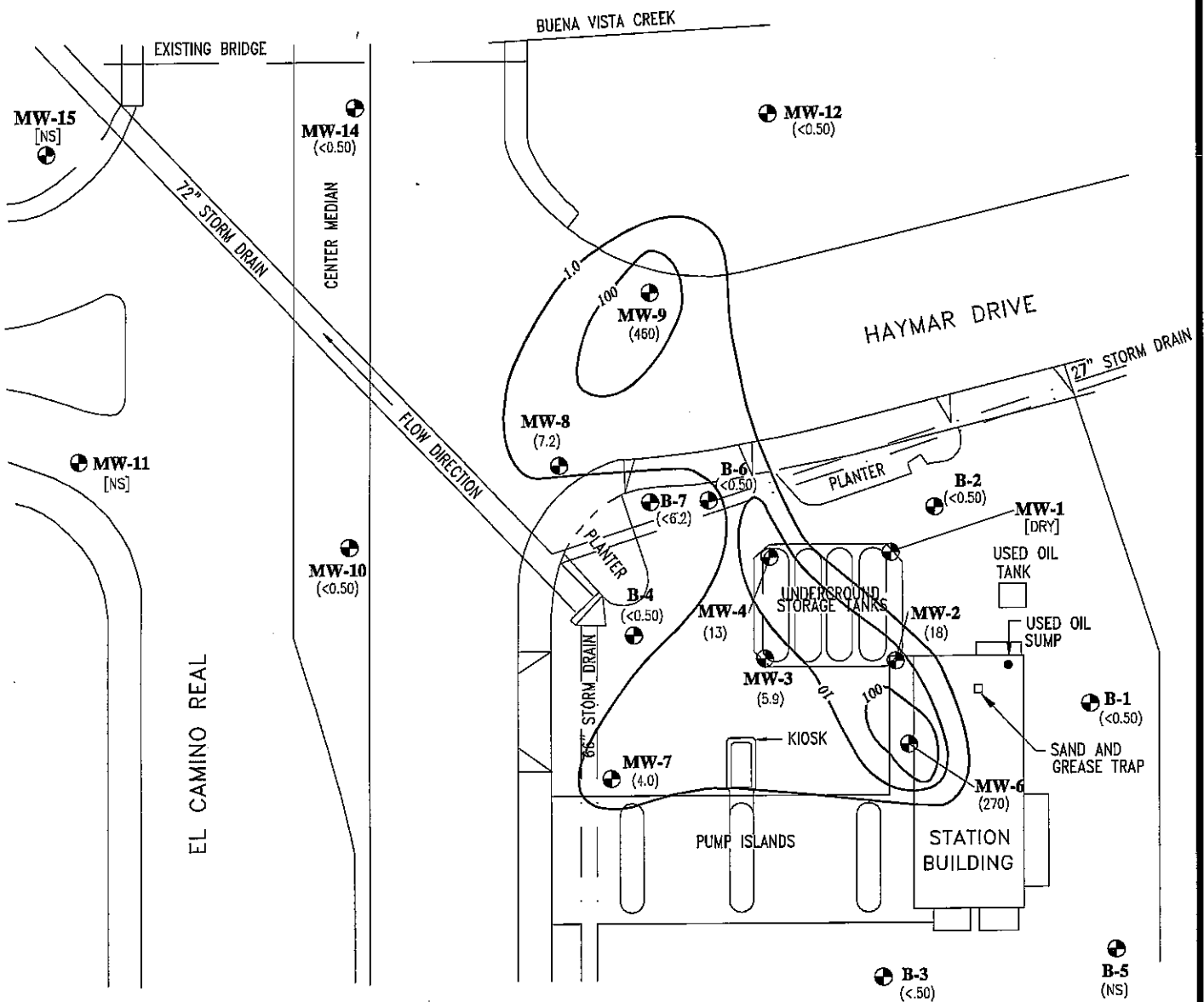
NOTES:

SITE PLAN ADAPTED FROM
BBC ENVIRONMENTAL, INC. FIGURE.

FIGURE 9

**TPHg ISOCONCENTRATION
MAP - APRIL 2, 2003**

CHEVRON STATION NO. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA



SECOR
International Incorporated
2655 CAMINO DEL RIO N., SUITE 302
SAN DIEGO, CA. 92108

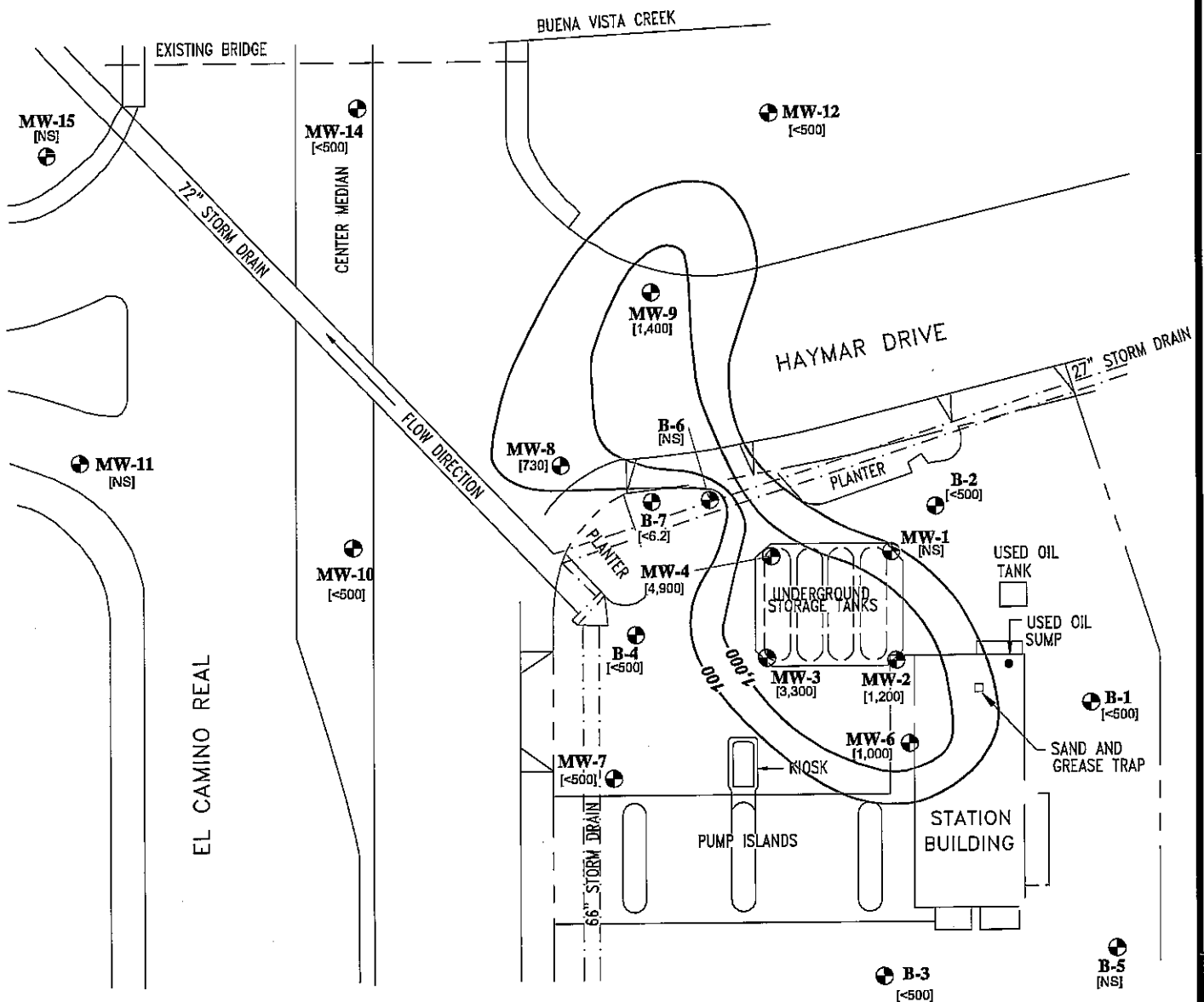
PROJECT: 08CH.51312.00 DATE: 01/21/03

NOTES:

SITE PLAN ADAPTED FROM
BBC ENVIRONMENTAL, INC. FIGURE.

**FIGURE 10
DISSOLVED BENZENE
ISOCONCENTRATION MAP -
NOVEMBER 20, 2002**

CHEVRON STATION NO. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA



LEGEND:

MW-2  GROUNDWATER MONITORING WELL

TPHg TOTAL PETROLEUM HYDROCARBONS AS GASOLINE

TPHg CONCENTRATIONS IN GROUNDWATER SAMPLES COLLECTED ON APRIL 2, 2003. CONCENTRATIONS REPORTED IN MICROGRAMS PER LITER ($\mu\text{g/L}$)

[NS] NOT SAMPLED

10

ESTIMATED TPHg ISOCONCENTRATION CONTOUR IN $\mu\text{g/L}$, QUERIED WHERE UNKNOWN



25 0 50
SCALE: 1" = 50'

NOTES:

SITE PLAN ADAPTED FROM BBC ENVIRONMENTAL, INC. FIGURE.

FIGURE 8

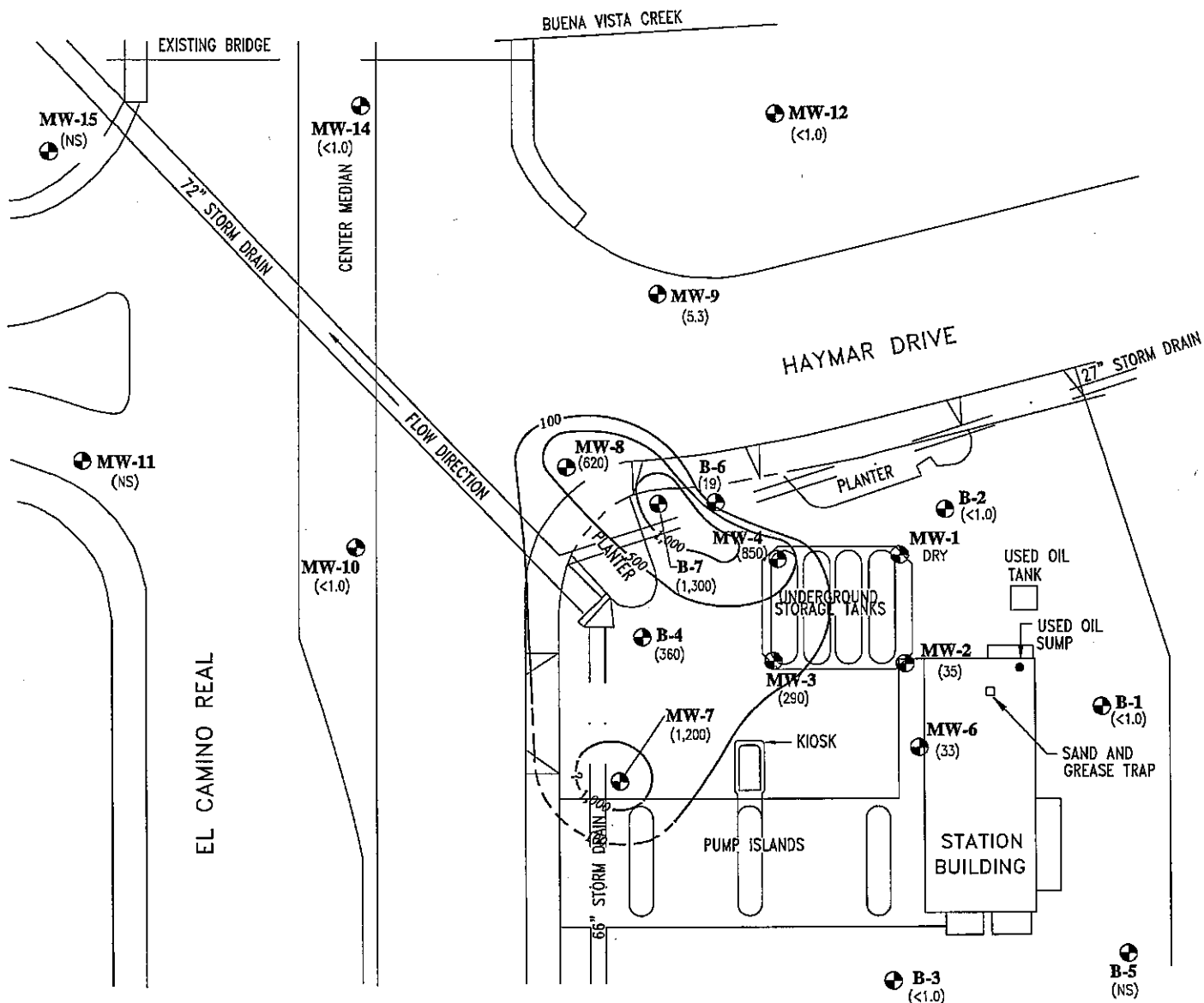
TPHg ISOCONCENTRATION MAP - NOVEMBER 20, 2002

CHEVRON STATION NO. 9-1312

2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

SECOR
International Incorporated
2655 CAMINO DEL RIO N., SUITE 302
SAN DIEGO, CA. 92108

PROJECT: 08CH.51312.00 DATE: 3/10/03



LEGEND:

- MW-2 GROUNDWATER MONITORING WELL
- (<0.50) MTBE CONCENTRATIONS IN MICROGRAMS PER LITER (µg/L)
- (NS) NOT SAMPLED
- DASHED WHERE INFERRED



25 0 50
SCALE: 1" = 50'

SECOR
International Incorporated
2655 CAMINO DEL RIO N., SUITE 302
SAN DIEGO, CA. 92108

PROJECT: 08CH.51312.00 DATE: 01/21/03

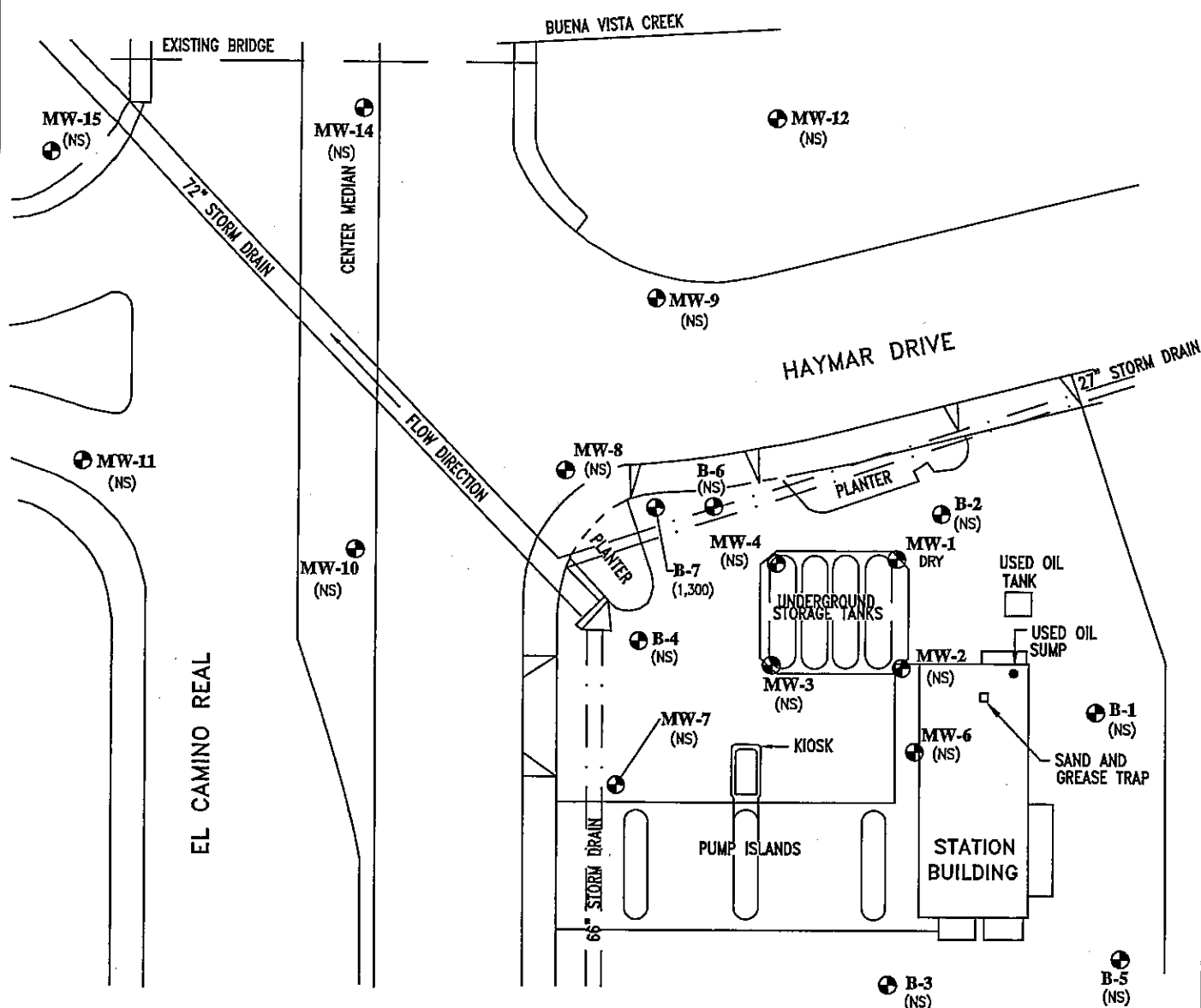
NOTES:

SITE PLAN ADAPTED FROM
BBC ENVIRONMENTAL, INC. FIGURE.


FIGURE 4

DISSOLVED MTBE
ISOCONCENTRATION MAP -
NOV. 20, 2002

CHEVRON STATION NO. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA



LEGEND:

- MW-2  GROUNDWATER MONITORING WELL
- (<0.50) MTBE CONCENTRATIONS IN MICROGRAMS PER LITER (ug/L)
- (NS) NOT SAMPLED



25 0 50
SCALE: 1" = 50'

SECOR
International Incorporated
2655 CAMINO DEL RIO N., SUITE 302
SAN DIEGO, CA. 92108

NOTES:

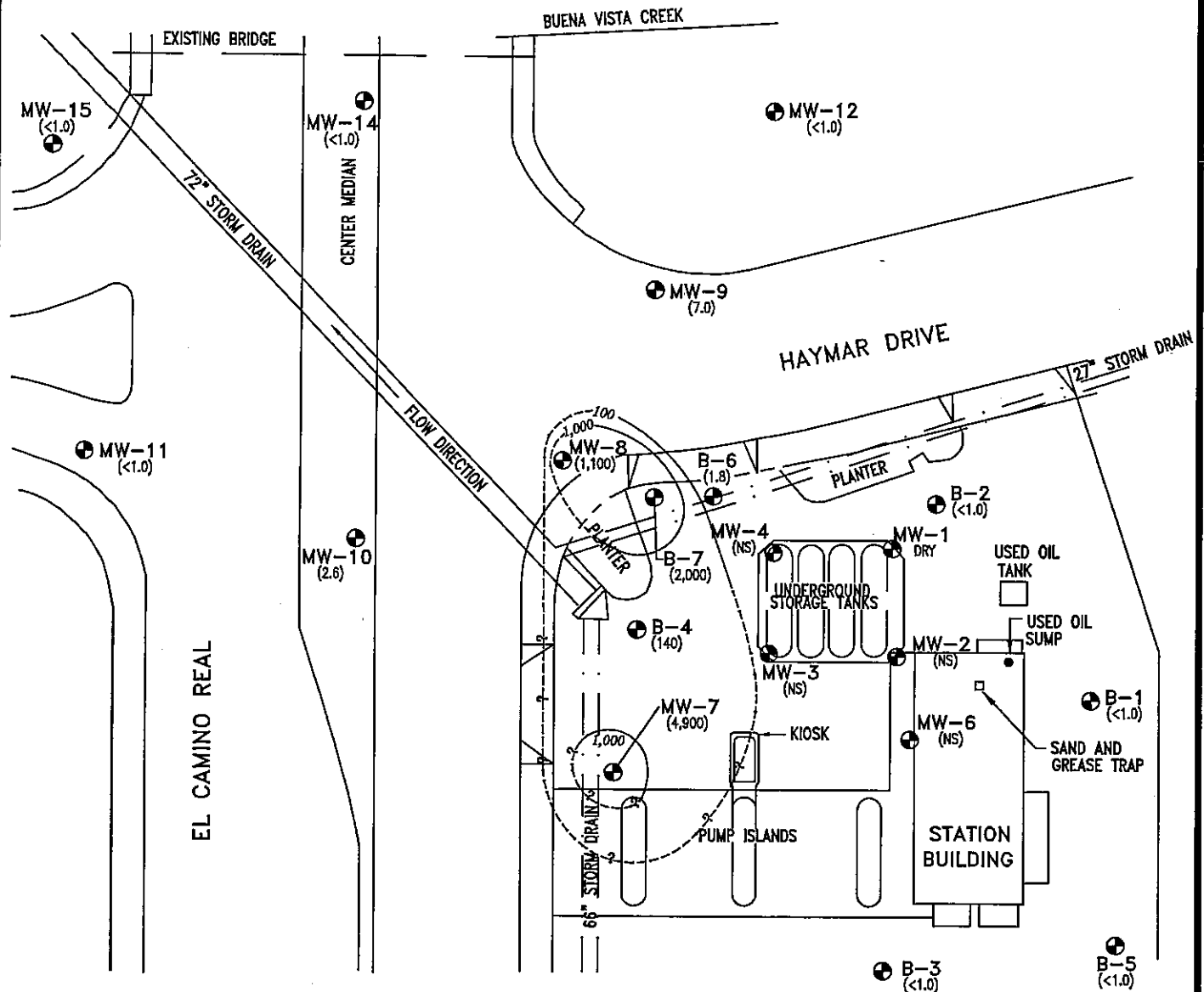
SITE PLAN ADAPTED FROM
BBC ENVIRONMENTAL, INC. FIGURE.

FIGURE 4
DISSOLVED MTBE
ISOCONCENTRATION MAP -
JULY 25, 2002

CHEVRON STATION NO. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

K:_2002dmg\Chevron2002\9-1312-2K2\9-13120MTBE7-02.DWG

PROJECT: 08CH.51312.00 DATE: 10/24/02



NOTES:

SITE PLAN ADAPTED FROM
BBC ENVIRONMENTAL, INC. FIGURE.

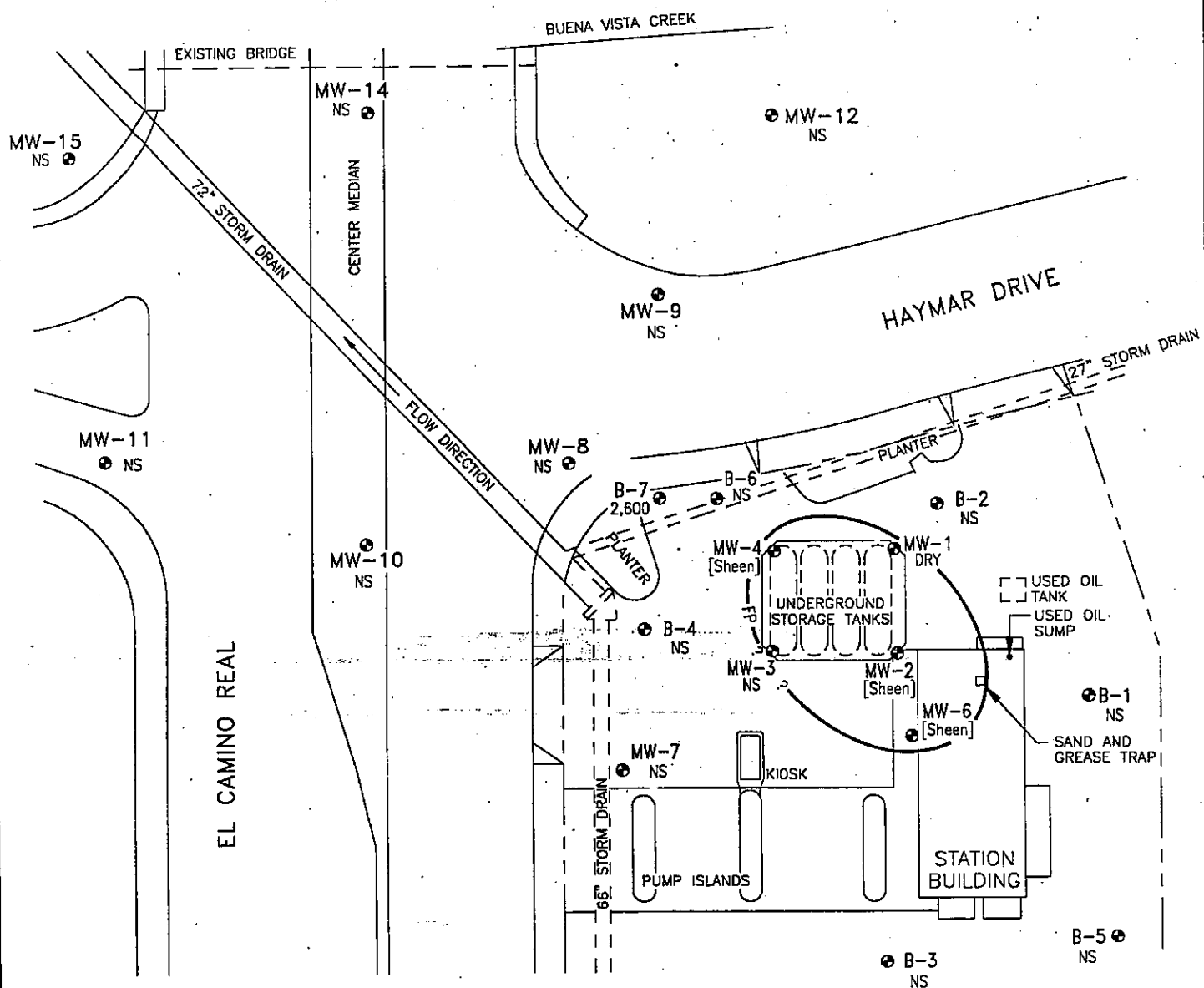
FIGURE 4
DISSOLVED MTBE
ISOCONCENTRATION MAP -
MAY 21, 2002

CHEVRON STATION NO. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

SECOR
International Incorporated
2655 CAMINO DEL RIO N., SUITE 302
SAN DIEGO, CA. 92108

..2002dwgs\Chevron2002\9-1312-2K2\91312MTBE5-02R.DWG

PROJECT: 08CH.51312.00 DATE: 8/26/02



25 0 25 50
SCALE: 1" = 50' (FEET)

LEGEND

● B-7
2,600

MONITORING WELL
MTBE CONCENTRATIONS
IN GROUNDWATER (ug/l).
SAMPLED 1/28/02.

NS

NOT SAMPLED.

[Sheen]

FREE PRODUCT [Feet].

— 10 —

ESTIMATED CONTOURS OF
EQUAL MTBE CONCENTRATIONS
IN GROUNDWATER (ug/l).

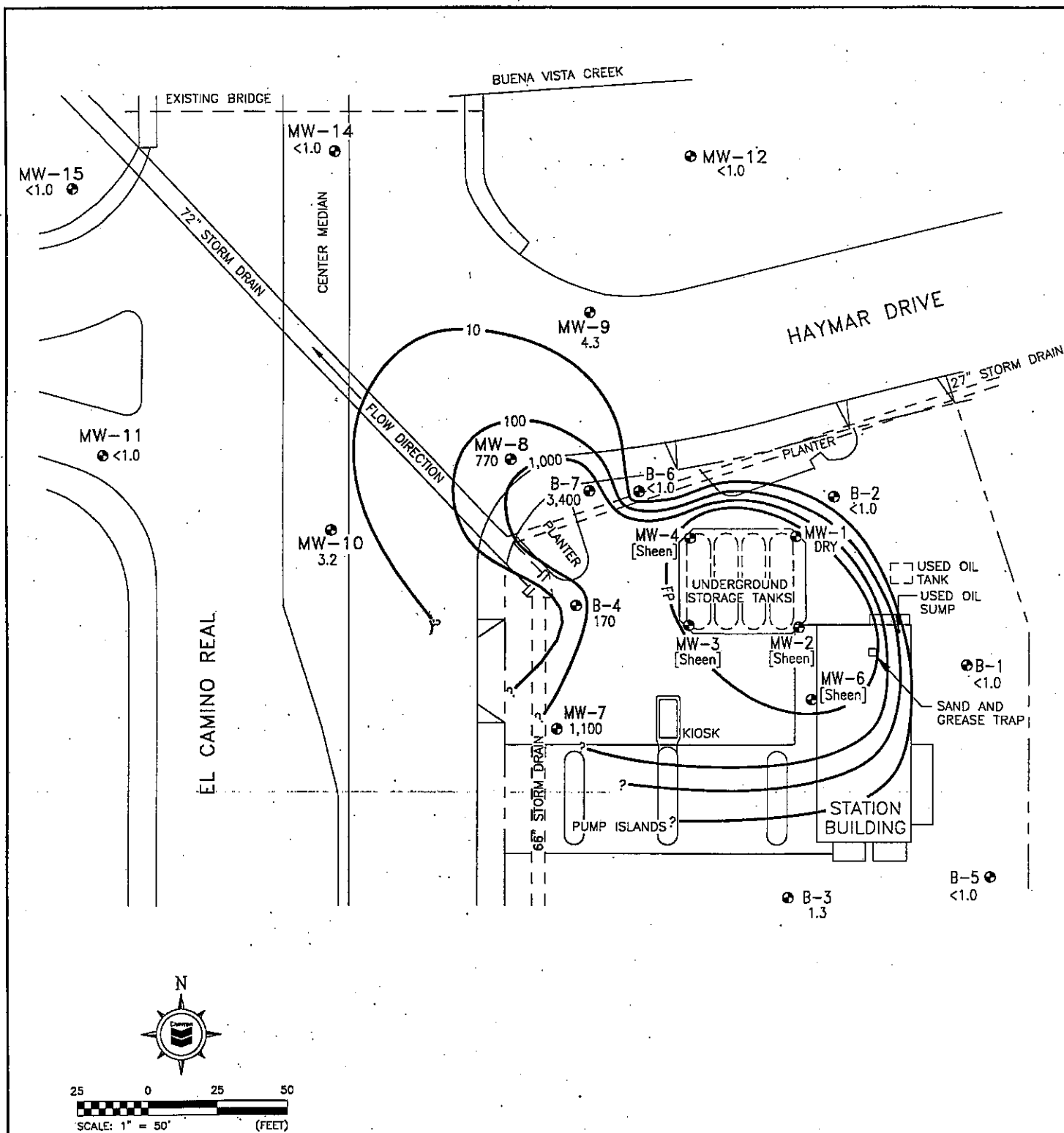
MTBE IN GROUNDWATER

CHEVRON STATION No. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

FIGURE No. 4

PROJECT No. CHEVRON R7.4

▼ BBC ENVIRONMENTAL, INC.



LEGEND

● B-7
3,400

NS

[Sheen]

10

MONITORING WELL
MTBE CONCENTRATIONS
IN GROUNDWATER (ug/l).
SAMPLED 10/18/01.

NOT SAMPLED.

FREE PRODUCT [Feet].

ESTIMATED CONTOURS OF
EQUAL MTBE CONCENTRATIONS
IN GROUNDWATER (ug/l).

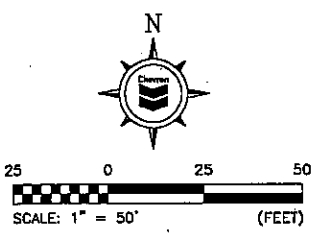
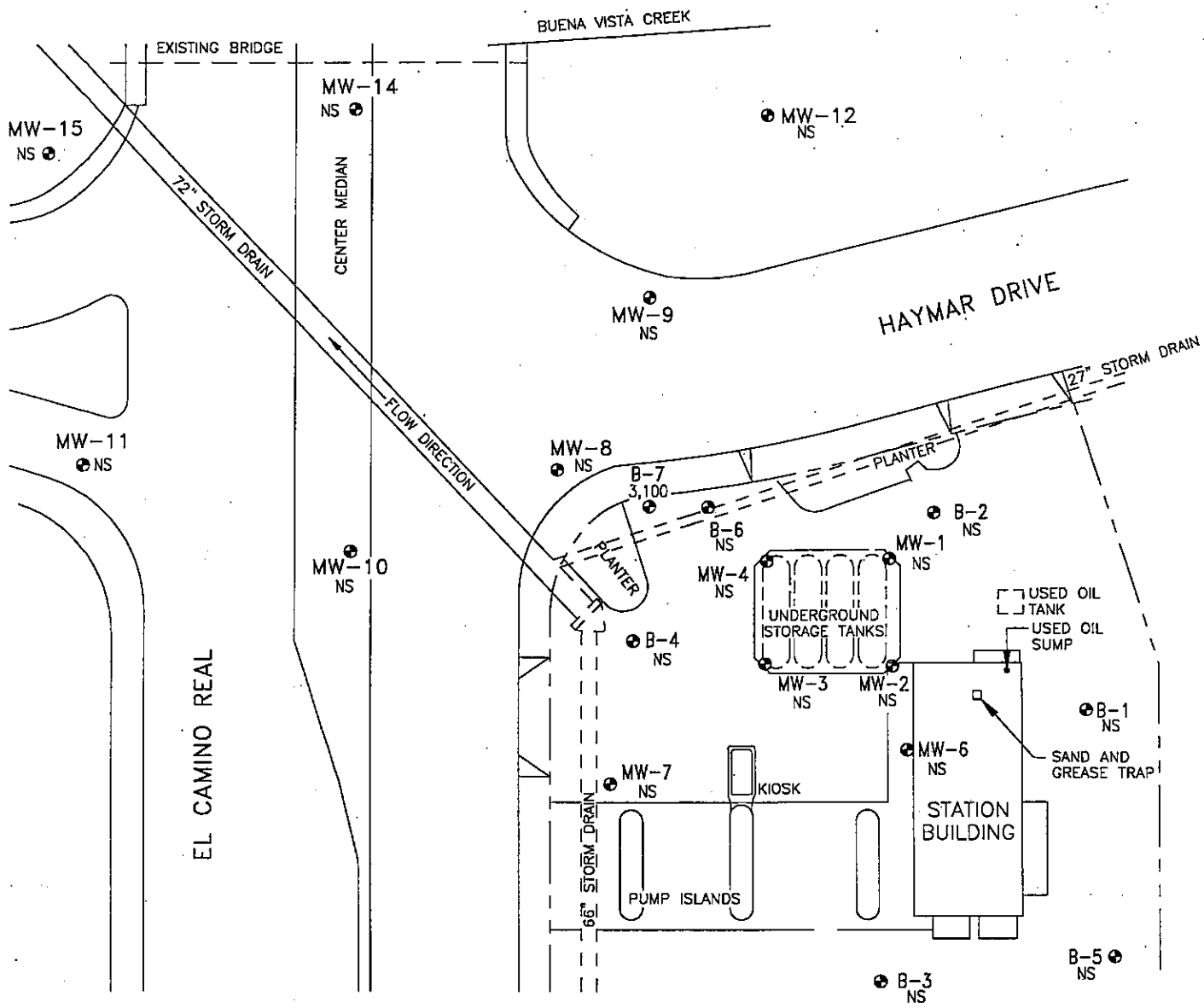
MTBE IN GROUNDWATER

CHEVRON STATION No. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

FIGURE No. 4

PROJECT No. CHEVRON R7.3

▼ BBC ENVIRONMENTAL, INC.



LEGEND

- B-7 3,100
MONITORING WELL.
MTBE CONCENTRATIONS
IN GROUNDWATER (ug/l).
SAMPLED 7/9/01.
- NS
NOT SAMPLED.
- 1,000 —
ESTIMATED CONTOURS OF
EQUAL MTBE CONCENTRATIONS
IN GROUNDWATER (ug/l).

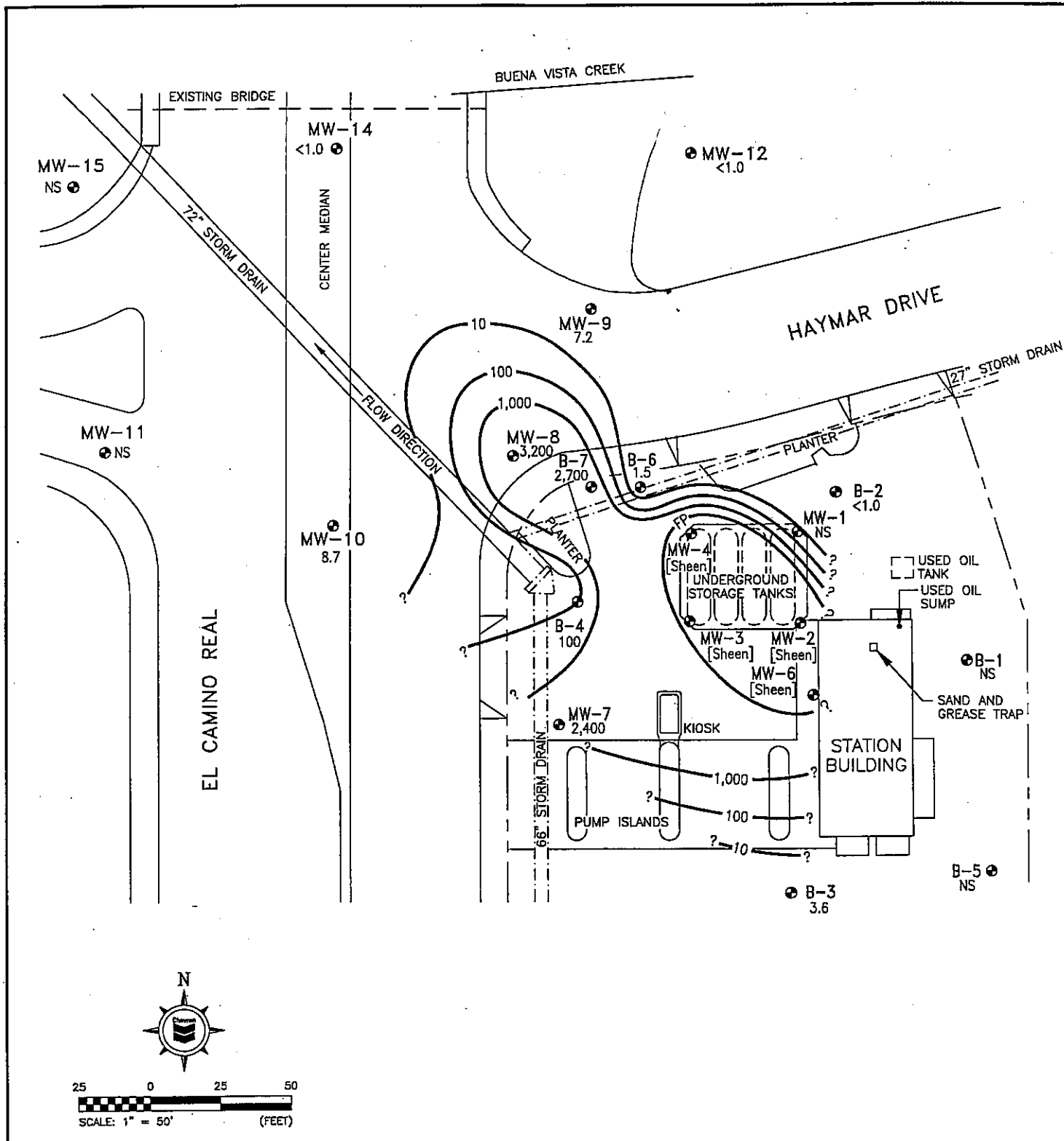
MTBE IN GROUNDWATER

CHEVRON STATION No. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

FIGURE No. 4

PROJECT No. CHEVRON R7.3

▼ BBC ENVIRONMENTAL, INC.



LEGEND

- B-7
2,700
[Sheen]
NS
— 10 —
- MONITORING WELL
MTBE CONCENTRATIONS
IN GROUNDWATER (ug/l).
SAMPLED 5/18/01.
- FREE PRODUCT [Feet].
- NOT SAMPLED.
- ESTIMATED CONTOURS OF
EQUAL MTBE CONCENTRATIONS
IN GROUNDWATER (ug/l).

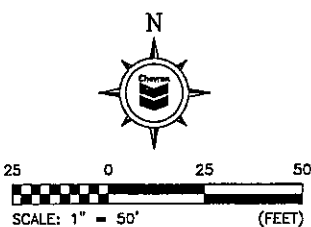
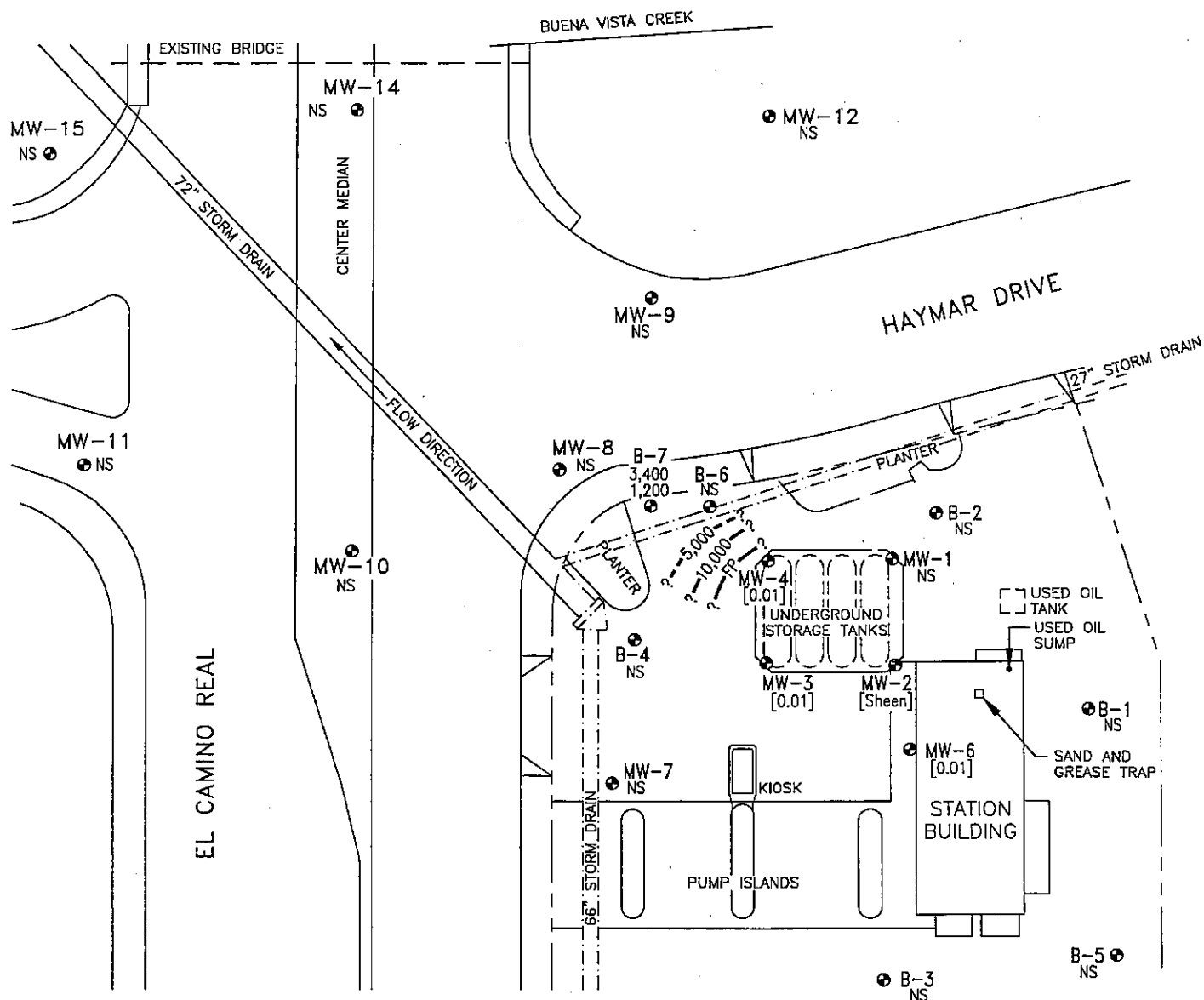
MTBE IN GROUNDWATER

CHEVRON STATION No. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

FIGURE No. 4

PROJECT No. CHEVRON R7.3

▼ BBC ENVIRONMENTAL, INC.



LEGEND

- B-7
3,400
1,200
[0.01]
NS
ESTIMATED CONTOURS OF
EQUAL MTBE CONCENTRATIONS
EQUAL TBA CONCENTRATIONS
IN GROUNDWATER (ug/l).
- 10,000 —
- - - 5,000 - - -
- MONITORING WELL.
MTBE CONCENTRATIONS
TBA CONCENTRATIONS
IN GROUNDWATER (ug/l).
SAMPLED 2/6/01.
- [0.01] FREE PRODUCT [Feet].
- NS NOT SAMPLED.

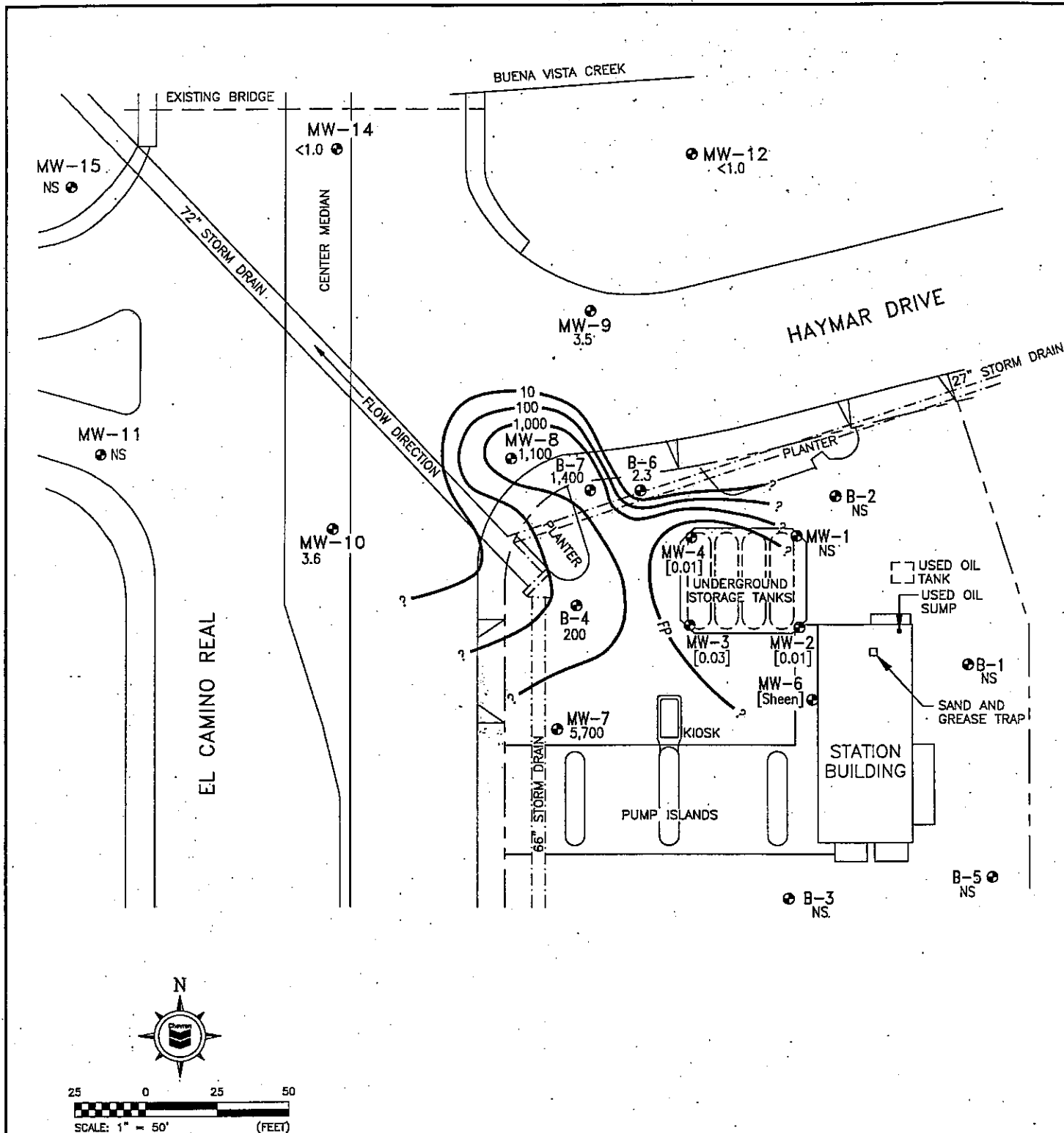
MTBE/TBA IN GROUNDWATER

CHEVRON STATION No. 9-1312
2500 EL CAMINO REAL
CARLSBAD, CALIFORNIA

FIGURE No. 4

PROJECT No. CHEVRON R7.3

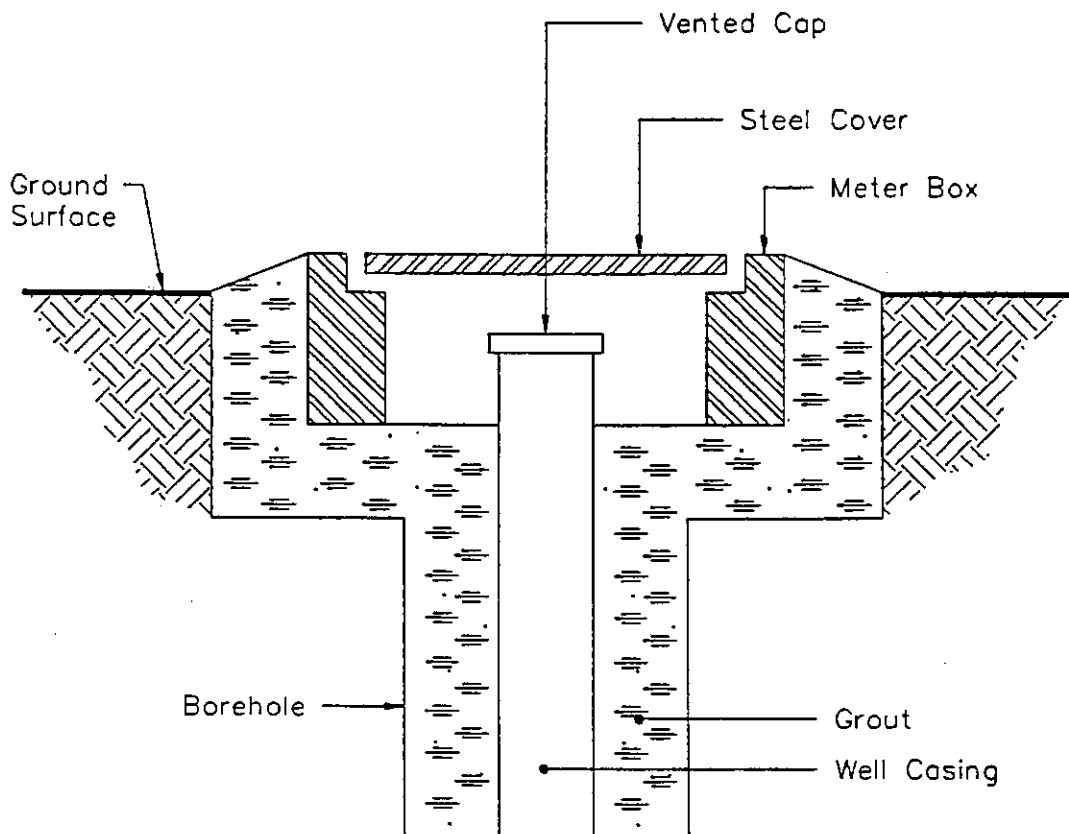
▼ BBC ENVIRONMENTAL, INC.



LEGEND	MTBE IN GROUNDWATER	
<p>● B-7 1,400</p> <p>[0.01]</p> <p>NS</p> <p>— 10 —</p>	<p>CHEVRON STATION No. 9-1312 2500 EL CAMINO REAL CARLSBAD, CALIFORNIA</p>	
<p>MONITORING WELL. MTBE CONCENTRATIONS IN GROUNDWATER (ug/l). SAMPLED 10/18/00.</p> <p>FREE PRODUCT [Feet].</p> <p>NOT SAMPLED.</p> <p>ESTIMATED CONTOURS OF EQUAL MTBE CONCENTRATIONS IN GROUNDWATER (ug/l).</p>	<p>FIGURE No. 4</p>	<p>PROJECT No. CHEVRON R7.3</p> <p>BBC ENVIRONMENTAL, INC.</p>

APPENDIX B

Borehole/Well Logs



WELLHEAD DETAIL

	Bentonite-Cement Grout		Bentonite Grout
	Blank PVC Casing		
	Bentonite Seal		
	Filter Sand		
	Slotted PVC Casing		
	Slough		

KEY TO WELL DETAIL (ON LOGS OF BORINGS)



Harding Lawson Associates
Engineering and
Environmental Services

WELLHEAD DETAIL
Chevron Carlsbad
Carlsbad, California

PLATE

B2

DRAWN
HK
















PROJECT NUMBER
10925-702

APPROVED
RM

DATE
2/93

REVISED

DATE

MAJOR DIVISIONS					TYPICAL NAMES
COARSE - GRAINED SOILS MORE THAN HALF IS LARGER THAN NO. 200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN No. 4 SIEVE SIZE	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW		WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES
			GP		POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES
		GRAVELS WITH OVER 12% FINES	GM		SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
			GC		CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE SIZE	CLEAN SANDS WITH LITTLE OR NO FINES	SW		WELL-GRADED SANDS, GRAVELLY SANDS
			SP		POORLY GRADED SANDS, GRAVELLY SANDS
		SANDS WITH OVER 12% FINES	SM		SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES
			SC		CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES
FINE - GRAINED SOILS MORE THAN HALF IS SMALLER THAN NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT 50% OR LESS		ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			OL		ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50%		MH		INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
			CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH		ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			Pt		PEAT AND OTHER HIGHLY ORGANIC SOILS

UNIFIED SOIL CLASSIFICATION SYSTEM

- - "Undisturbed" Sample
- ☒ - Bulk or Classification Sample
- PID - Photoionization Detector Reading
(10,2 electron-volt lamp, calibrated against a benzene standard)

HC odor - Hydrocarbon Odor

- No - No Odor
- Lo - Slight Odor
- Md - Moderate Odor
- Sg - Strong Odor

KEY TO BORING LOG



Harding Lawson Associates
Engineers, Geologists
& Geophysicists

**SOIL CLASSIFICATION CHART
& KEY TO BORING LOG**
Chevron Service Station 1312
Carlsbad, California

PLATE

2

DRAWN
km

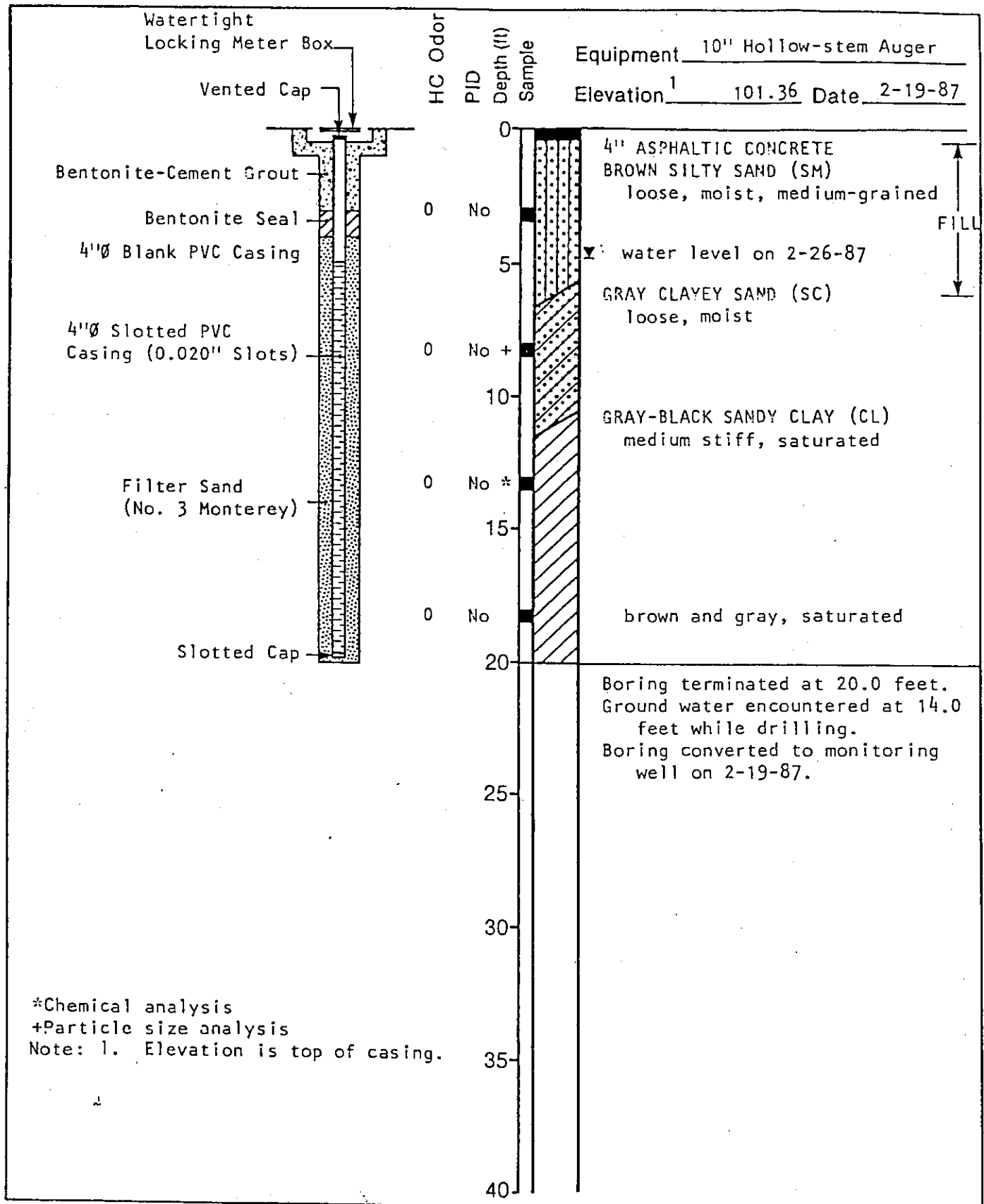
JOB NUMBER
9611,111.11

APPROVED
JRR

DATE
9/18/87

REVISED

DATE



Harding Lawson Associates
Engineers, Geologists
& Geophysicists

LOG OF BORING B-1
Chevron Service Station 1312
Carlsbad, California

PLATE

4

DRAWN
km

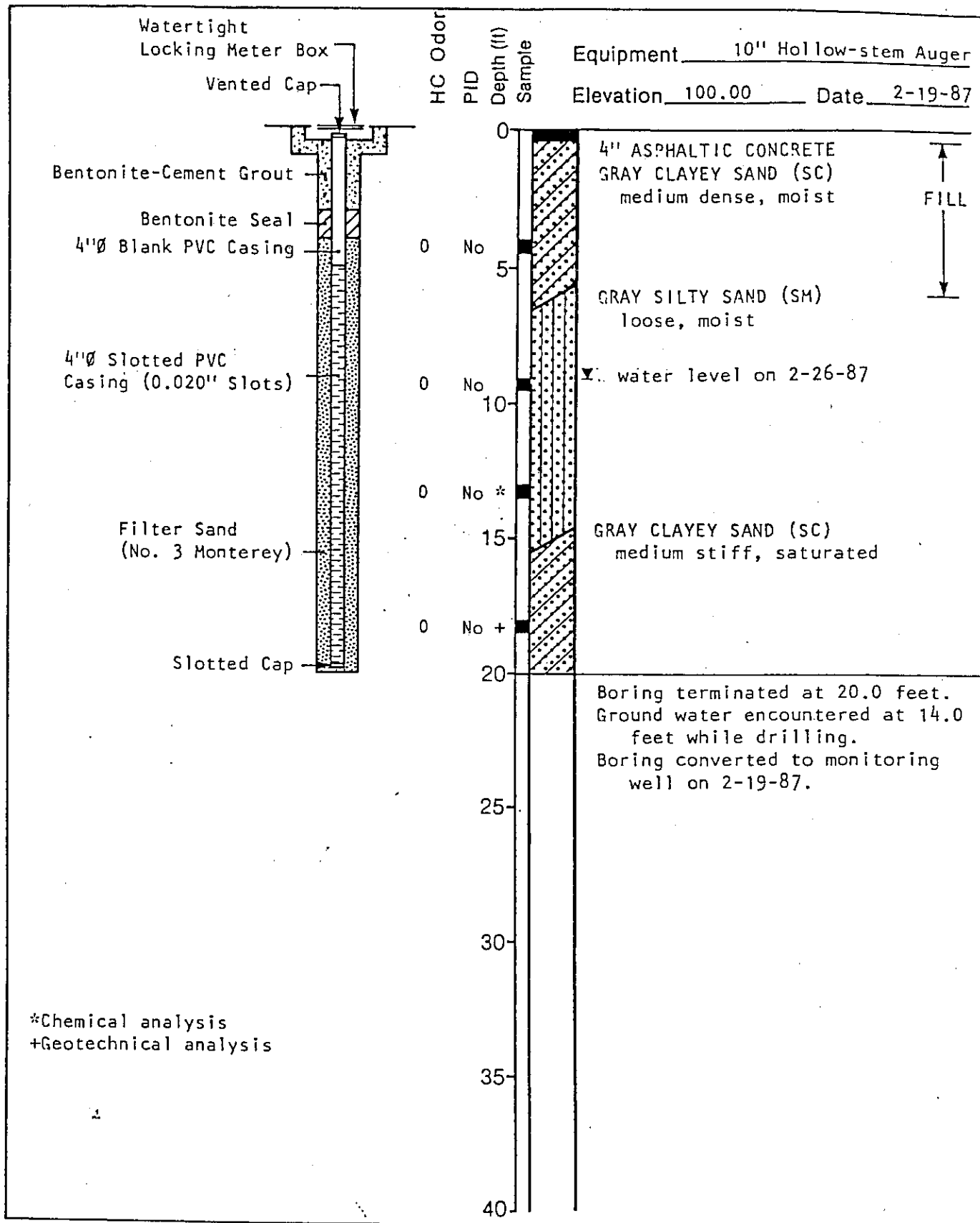
JOB NUMBER
9611.111.11

APPROVED
HAB

DATE
3-12-87

REVISED

DATE



Harding Lawson Associates
 Engineers, Geologists
 & Geophysicists

LOG OF BORING B-2
 Chevron Service Station 1312
 Carlsbad, California

PLATE

5

DRAWN
km

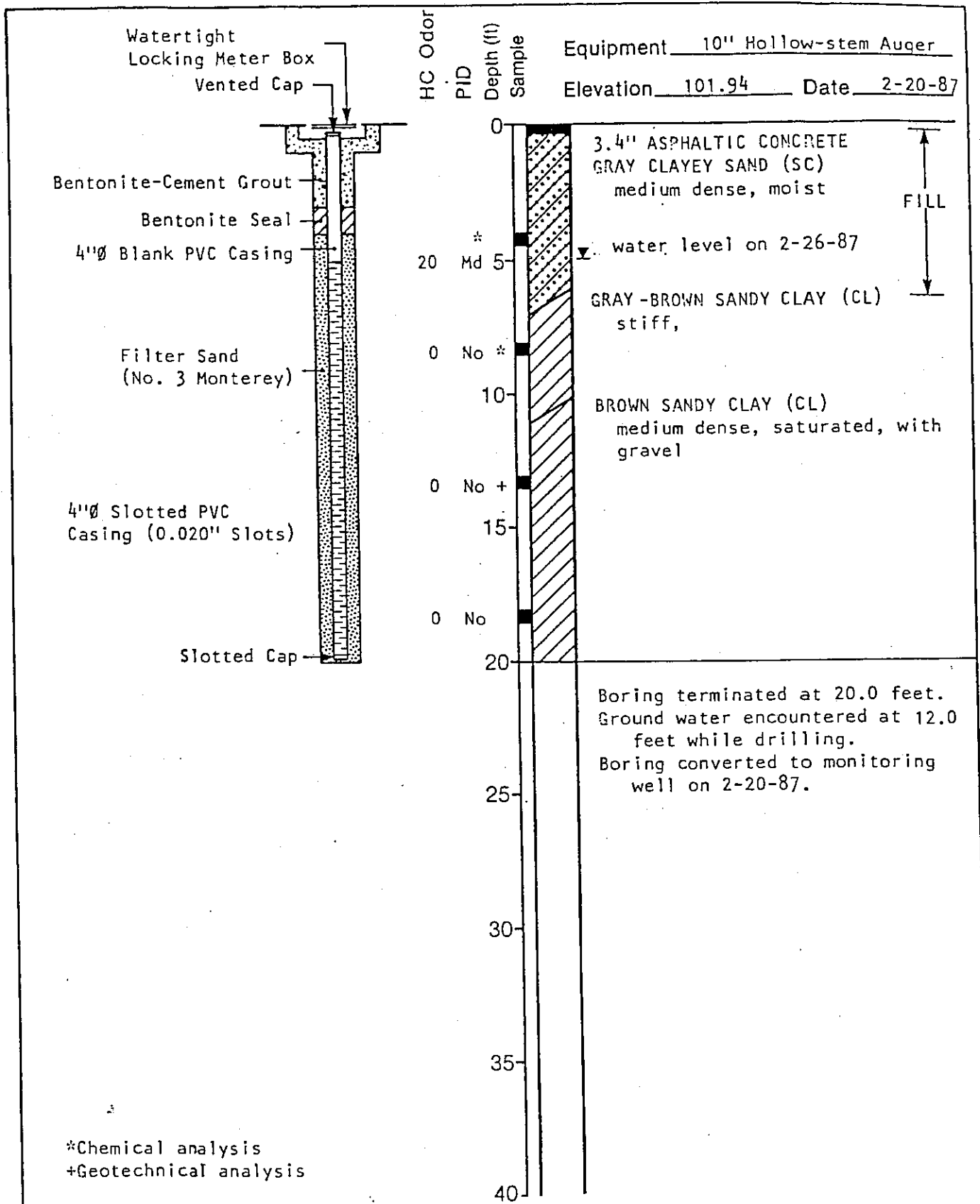
JOB NUMBER
9611.111.11

APPROVED
BA B

DATE
3-12-87

REVISED

DATE



Harding Lawson Associates
Engineers, Geologists
& Geophysicists

LOG OF BORING B-3
Chevron Service Station 1312
Carlsbad, California

PLATE

6

DRAWN
km

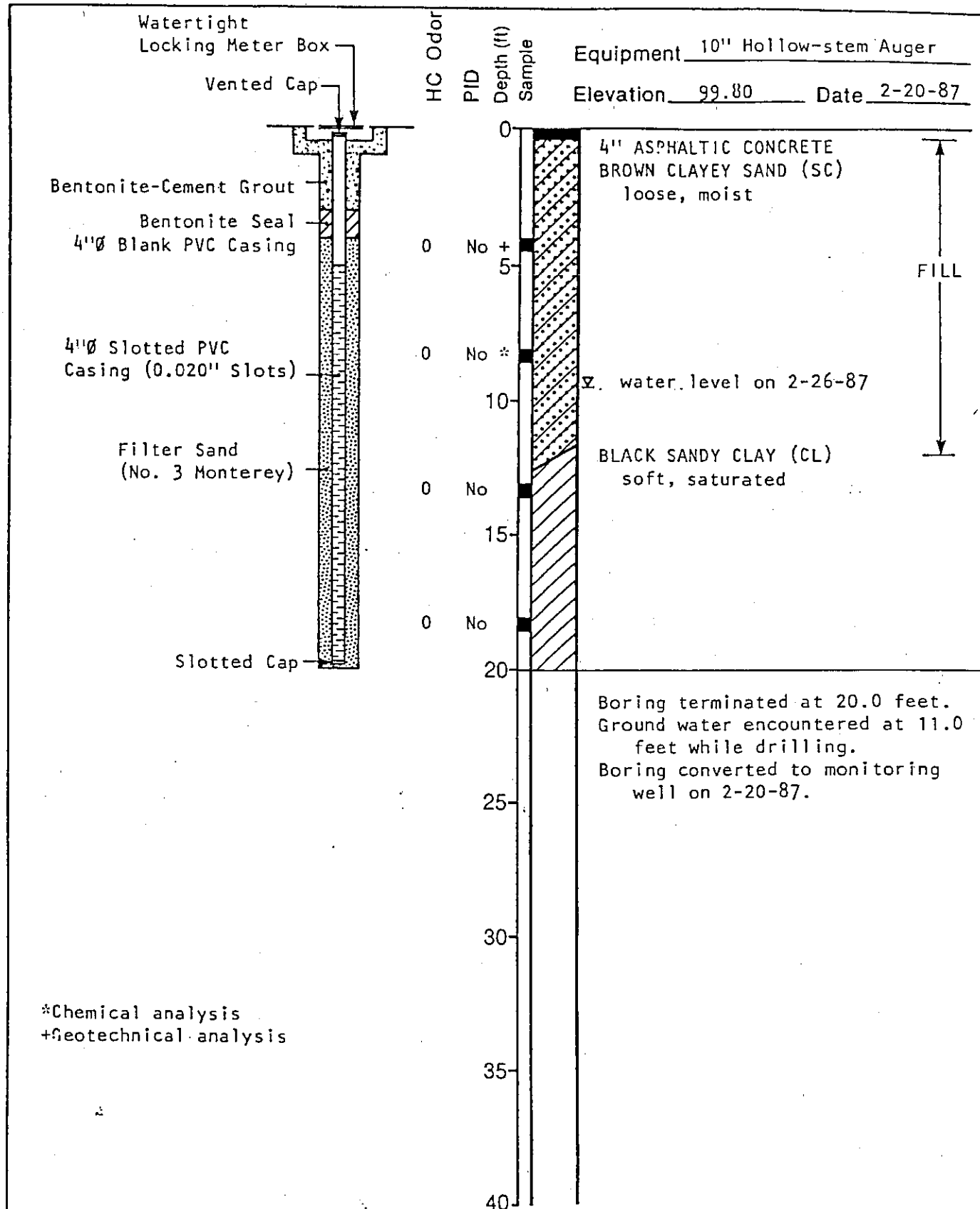
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9611.111.11

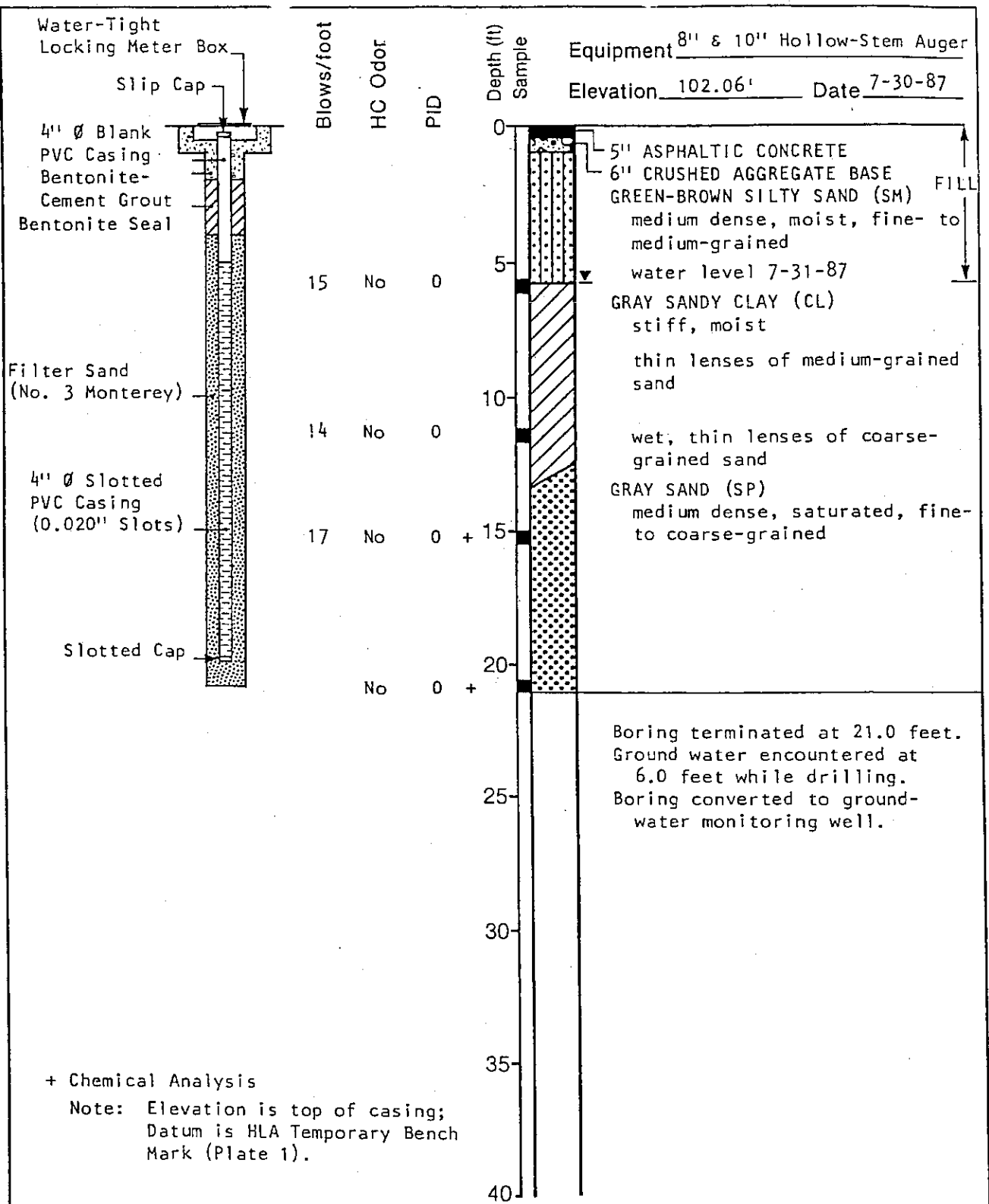
APPROVED
BAB

DATE
3-12-87

REVISED

DATE





Harding Lawson Associates
Engineers, Geologists
& Geophysicists

LOG OF BORING B-5

Chevron Service Station 1312
Carlsbad, California

PLATE

3

DRAWN
tl

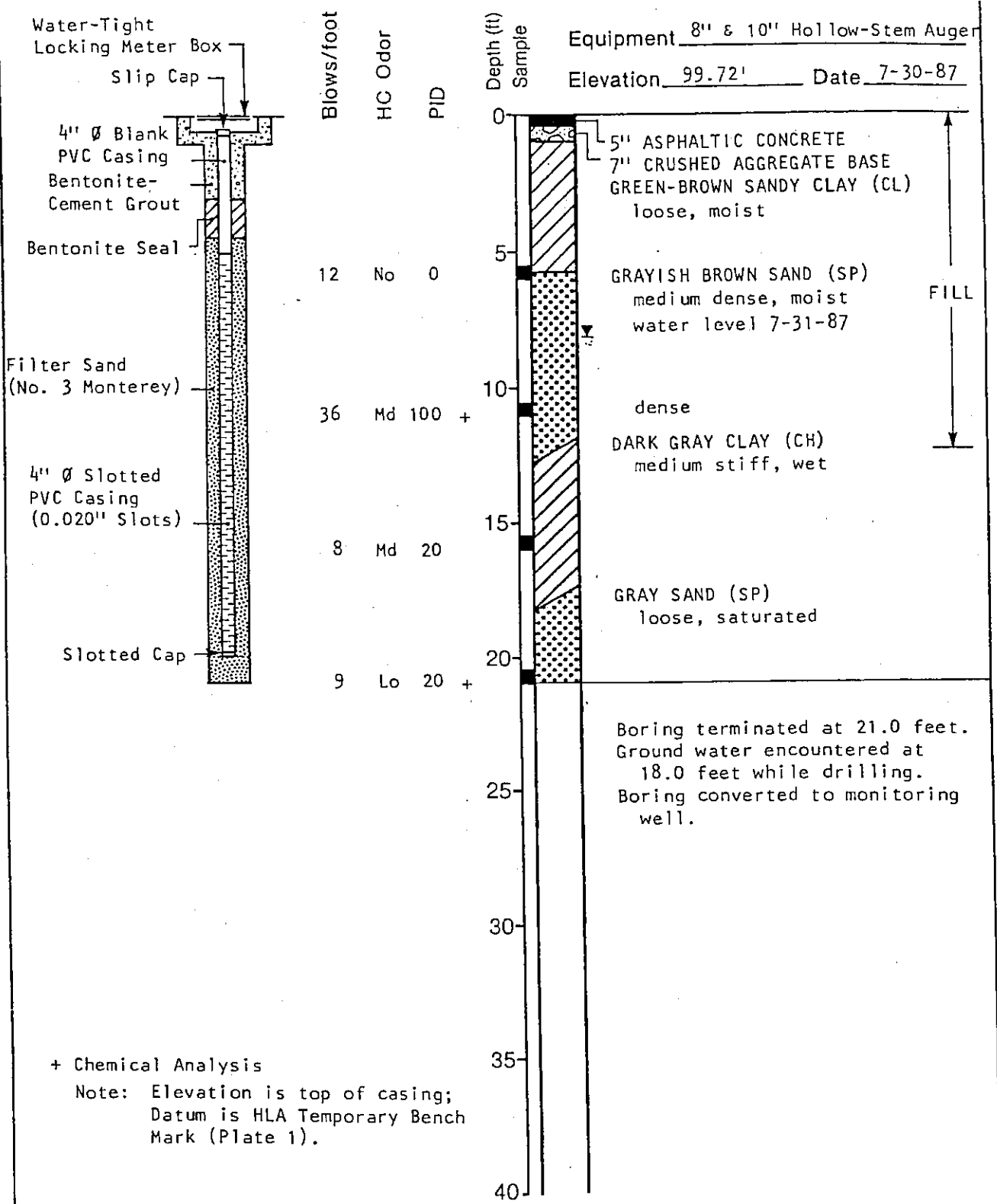
JOB NUMBER
9611,111.11

APPROVED
C-7/sts

DATE
9/18/87

REVISED

DATE



Harding Lawson Associates
Engineers, Geologists
& Geophysicists

LOG OF BORING B-6
Chevron Service Station 1312
Carlsbad, California

PLATE

4

DRAWN
tl

JOB NUMBER
9611,111.11

APPROVED
WJS/sts

DATE
9/18/87

REVISED

DATE

Top of Casing 97.36 ft(See Plate 5 for
Wellhead Construction)

10" dia. Borehole

4" dia. Blank
PVC Casing

Bentonite-Cement Grout

Bentonite Pellet Seal

Filter Sand
(No. 3 Monterey)4" dia. Slotted PVC
Casing (0.020" Slots)

Slotted Cap

Blows/ft

HC Odor

PID

Depth ft
Sample

Equipment

Mobil B-57 10" HSA

Elevation

NA

Date

4/4/89

3" ASPHALTIC CONCRETE
BROWN SANDY CLAY (CL)
soft to medium stiff, moist, approximately 20%
fine-grained sand, low plasticity
BROWN CLAYEY SAND (SC)
loose, moist, fine grained, trace gravel, may grade
in places to sand with clay

GRAY-BROWN SAND (SP)
loose, moist, fine grained
GRAY SANDY CLAY (CL)
medium stiff, very moist, approximately 20%
fine-grained sand, slight oxidation, some silt
water level measured on 4/5/89

GRAY SAND TO SILTY SAND (SM)
loose, wet, fine grained
DARK BROWN CLAY (CL)
soft, moist, with silt

becoming sandy
GRAY CLAYEY SAND (SC)
loose, moist, fine grained, with trace concretions

Boring terminated at 21.5 feet.
Ground water encountered approximately 13.5 to
14.0 feet.
Boring converted to ground-water monitoring well on
4/4/89.



Harding Lawson Associates
Engineers and Geoscientists

Log of Boring B- 7
Chevron Service Station 1312
Carlsbad, California

(sheet 1 of 1)

PLATE

3

DRAWN
HK

JOB NUMBER
9611,379.11

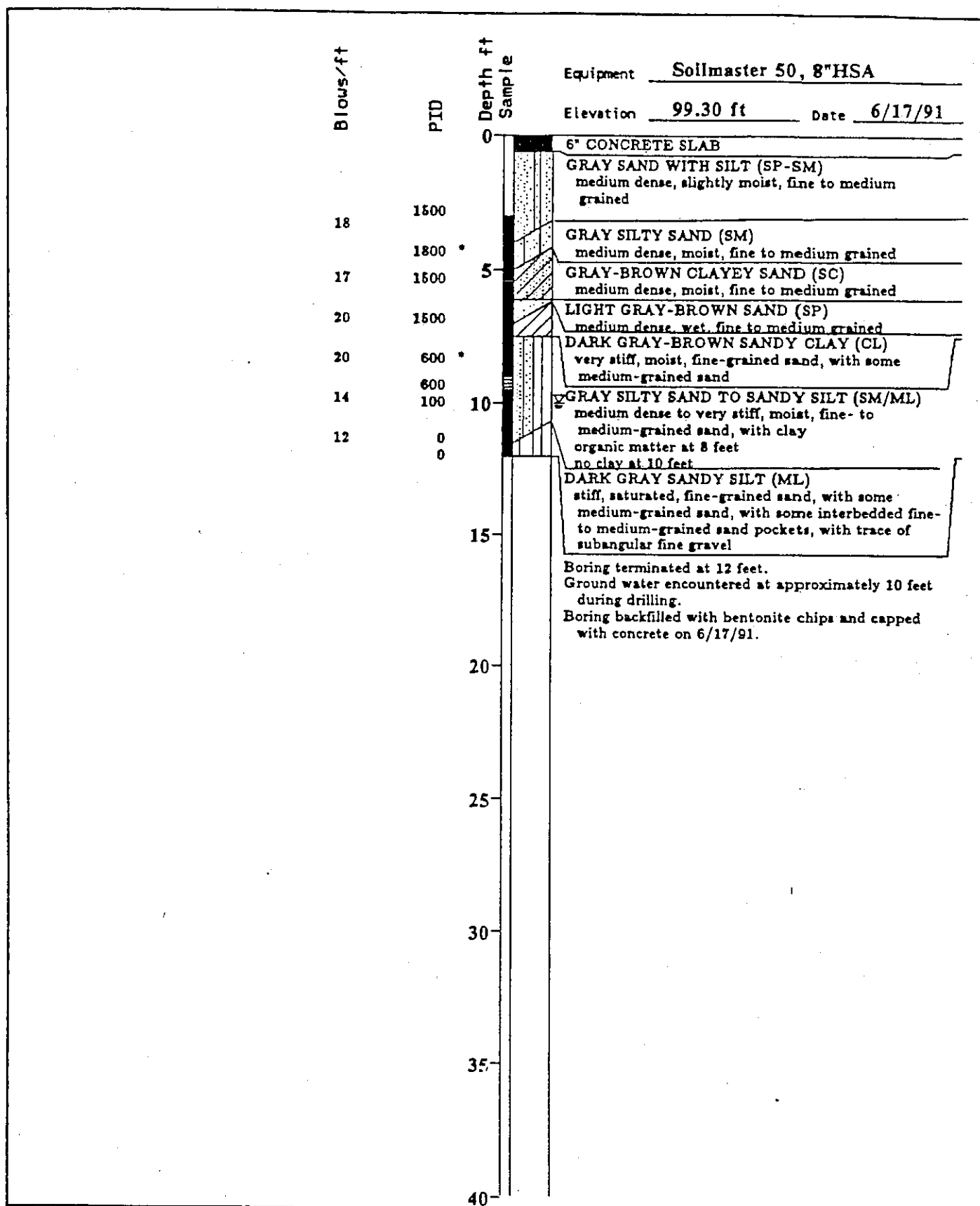
APPROVED

BPL

DATE
4/89

REVISED

DATE



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring B- 8
Chevron Carlsbad
Carlsbad, California

(sheet 1 of 1)

PLATE

B3

DRAWN

HK

PROJECT NUMBER

10925-702

APPROVED

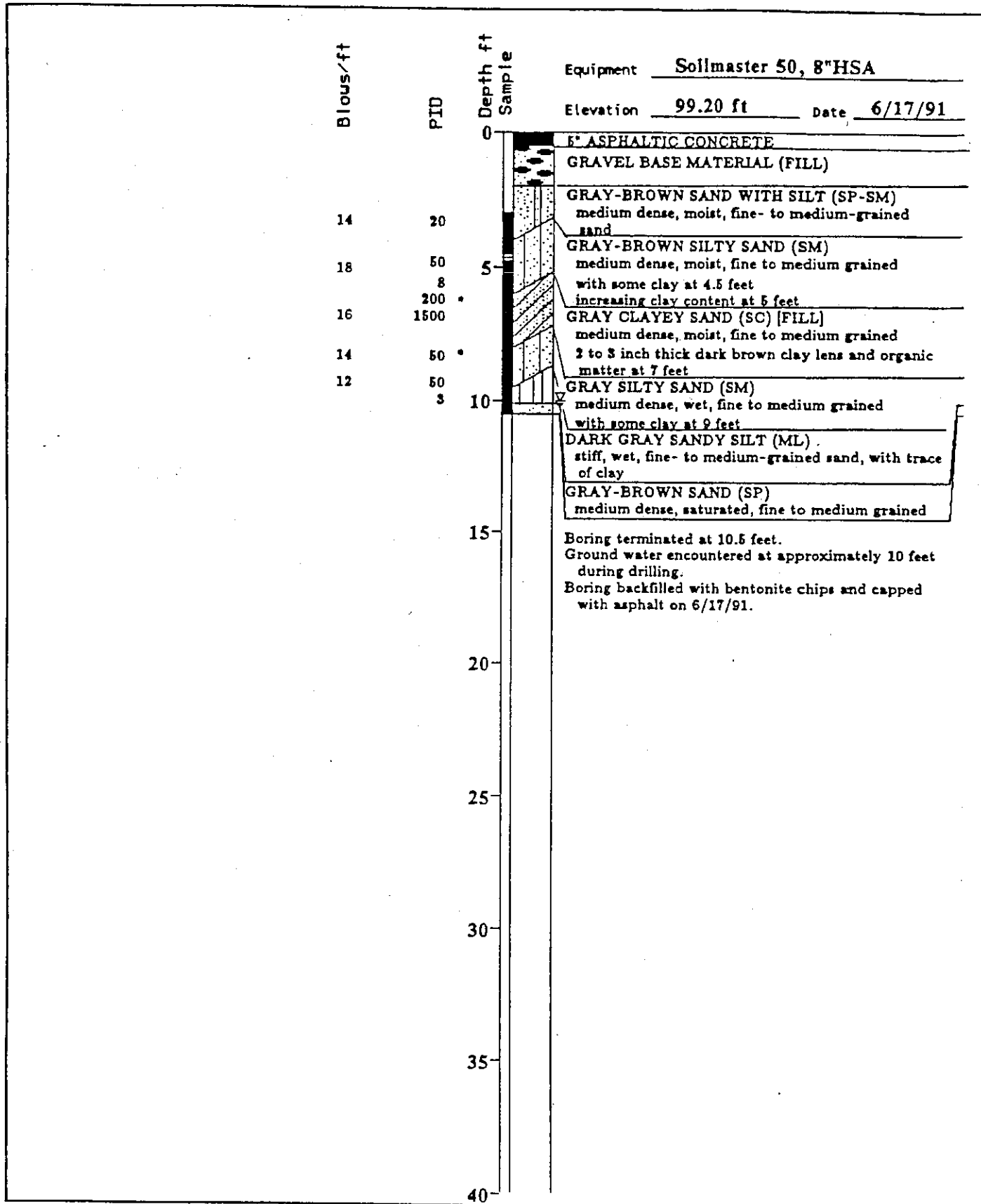
RTM

DATE

3/93

REVISED

DATE



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring B- 9

Chevron Carlsbad
Carlsbad, California

(sheet 1 of 1)

PLATE

B4

DRAWN

HK

PROJECT NUMBER

10925-702

APPROVED

RTM

DATE

3/93

REVISED

DATE

Blows/ft

PID

Depth ft
SampleEquipment B-61Elevation ft Date 8/19/92

17

13

18

15

80

70

9

5

10

0

3

3

0

10

15

20

25

30

35

40

3" ASPHALTIC CONCRETE

GRAY SANDY SILT (ML)

very stiff, moist, fine-grained sand, with trace of medium-grained sand

GRAY-BROWN SILTY SAND (SM)

medium dense, moist, fine to medium grained, with clay, with trace of subangular fine gravel

BROWN SANDY CLAY (CL)

stiff, moist, fine- to medium-grained sand

GRAY-BROWN SILTY SAND (SM)

medium dense, moist, fine grained, with some medium-grained sand, with clay

3 inch thick dark brown sandy clay lens at 7.5 feet

DARK GRAY-BROWN SANDY SILT (ML)

stiff, saturated, fine- to medium-grained sand

Boring terminated at 9 feet.

Ground water encountered at approximately 6.5 feet during drilling.

Boring backfilled with bentonite chips and capped with asphalt on 6/17/91.



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring B-10

(sheet 1 of 1)

PLATE

Chevron Carlsbad
Carlsbad, California

B5

DRAWN

HK

PROJECT NUMBER

10925-702

APPROVED

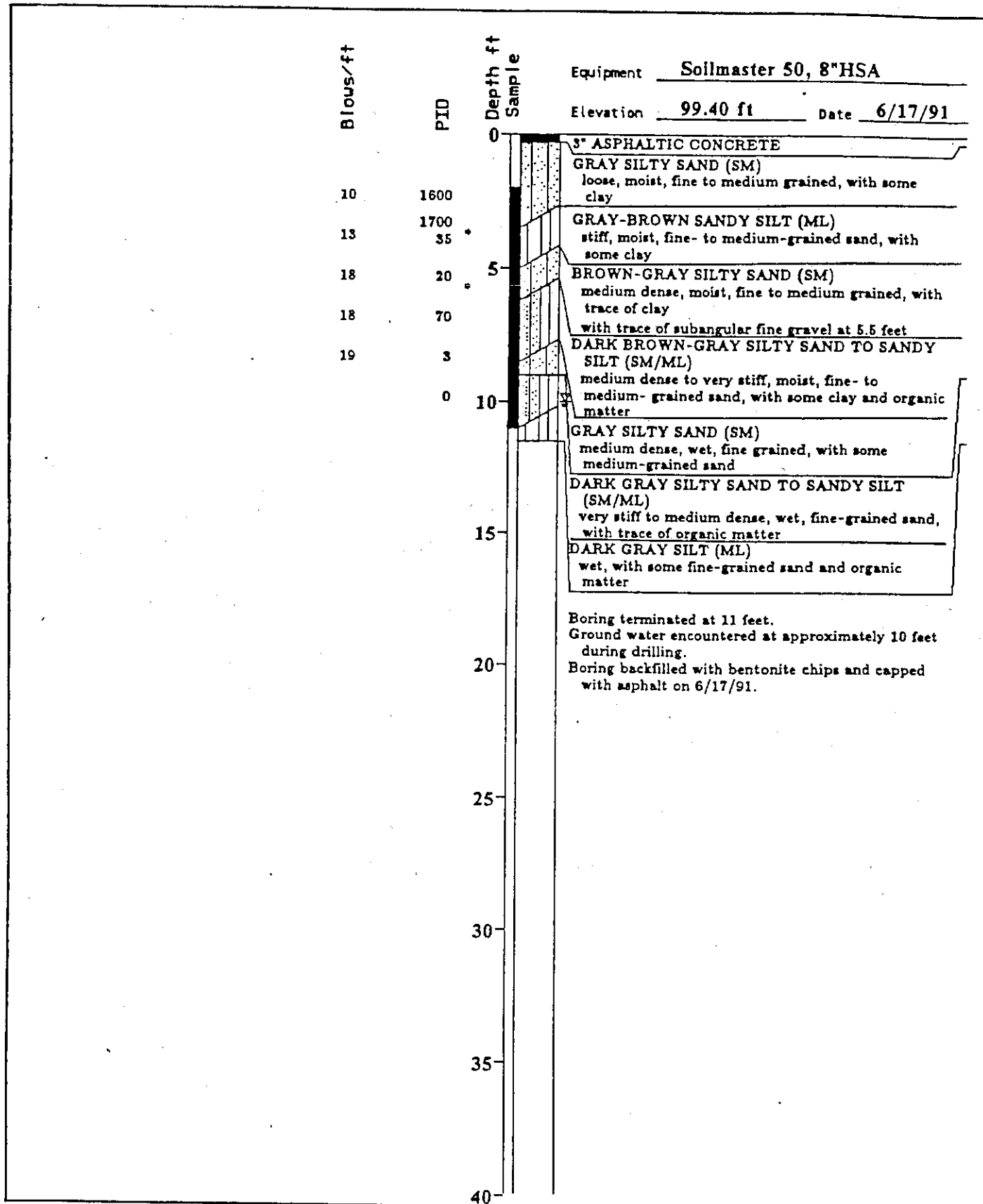
RTM

DATE

3/93

REVISED

DATE



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring B-11

Chevron Carlsbad
Carlsbad, California

(sheet 1 of 1)

PLATE

B6

DRAWN

HK

PROJECT NUMBER

10925-702

APPROVED

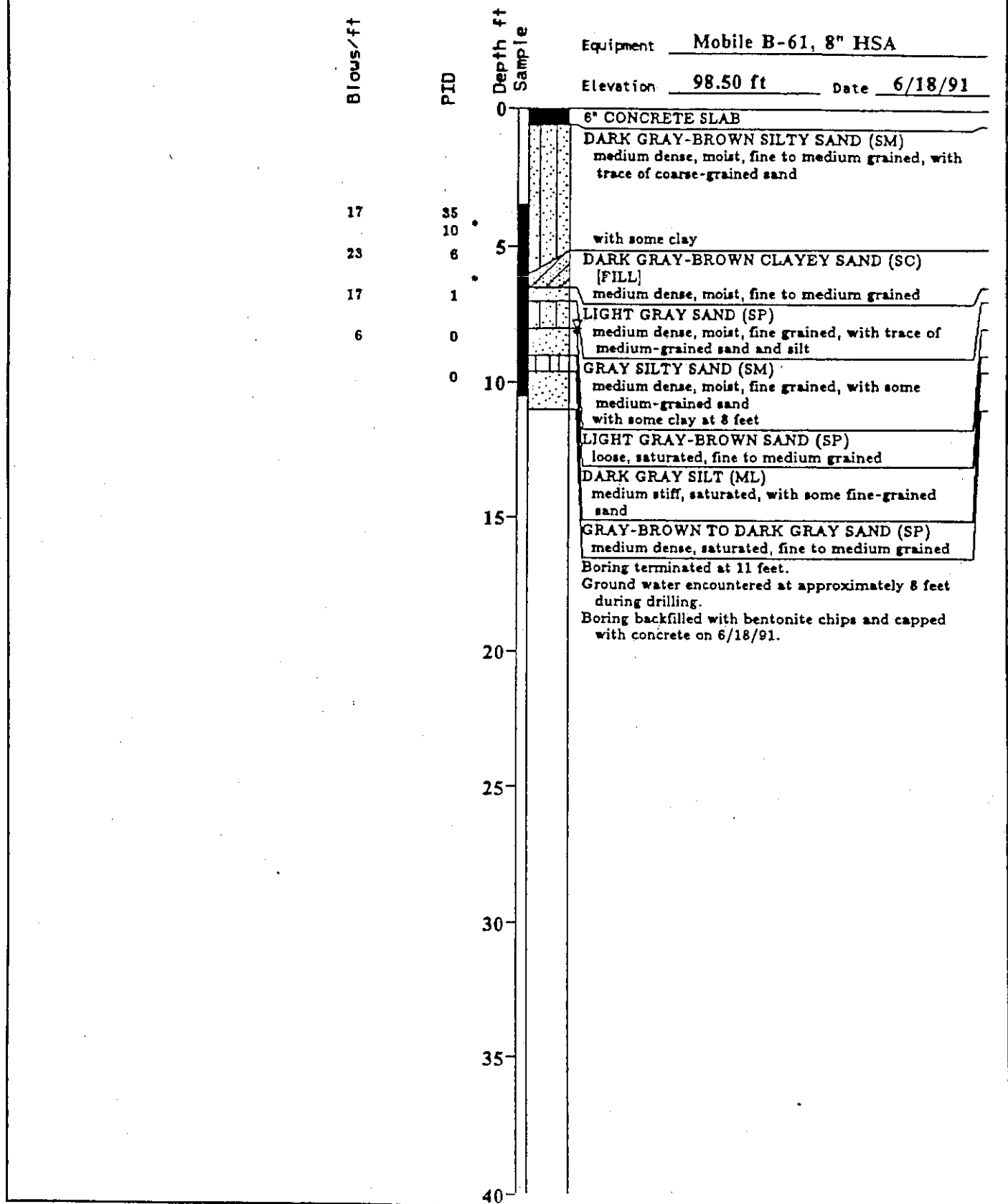
RTM

DATE

3/93

REVISED

DATE



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring B-12

Chevron Carlsbad
Carlsbad, California

(sheet 1 of 1)

PLATE

B7

DRAWN

HK

PROJECT NUMBER

10925-702

APPROVED

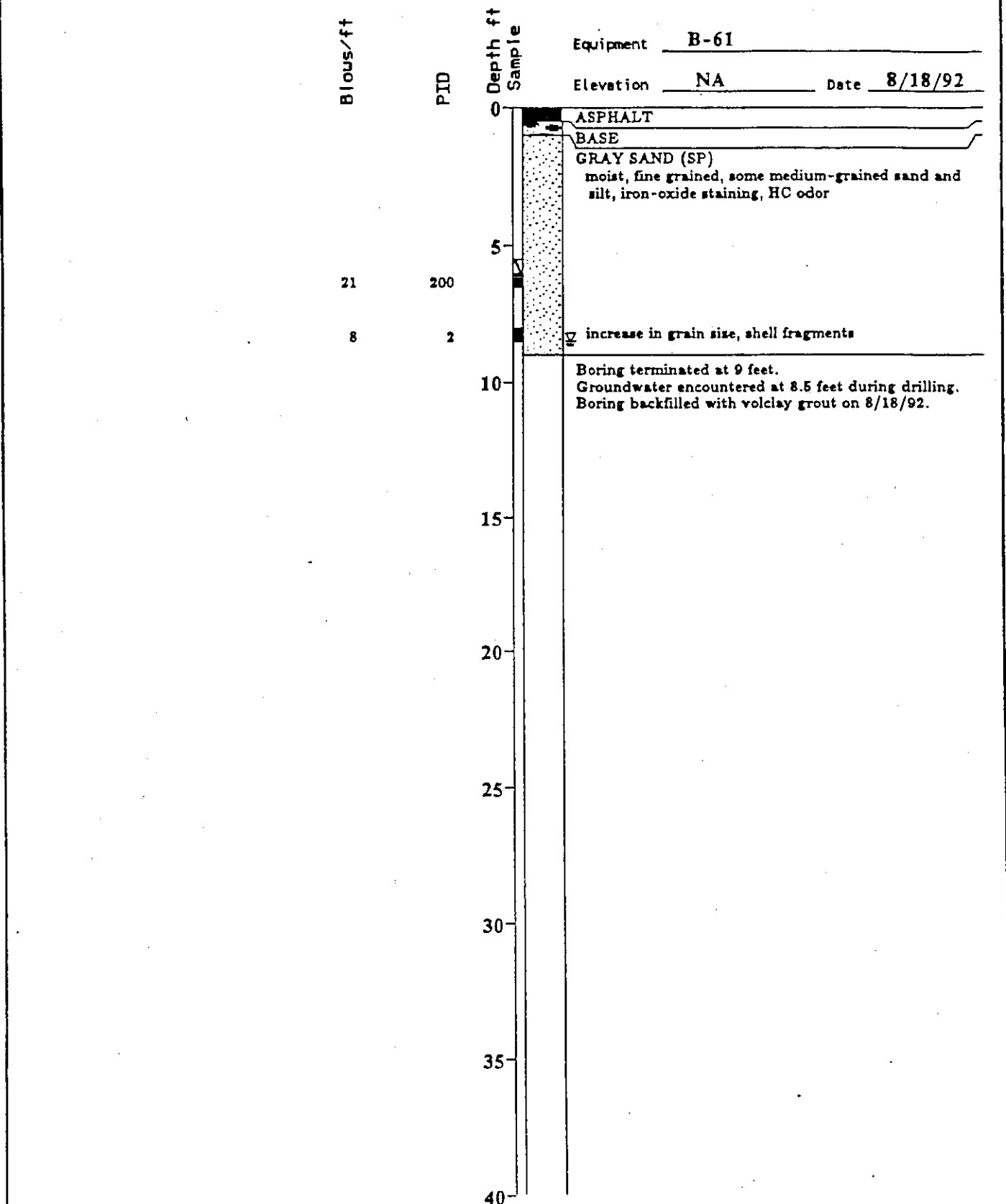
Rgm

DATE

3/93

REVISED

DATE

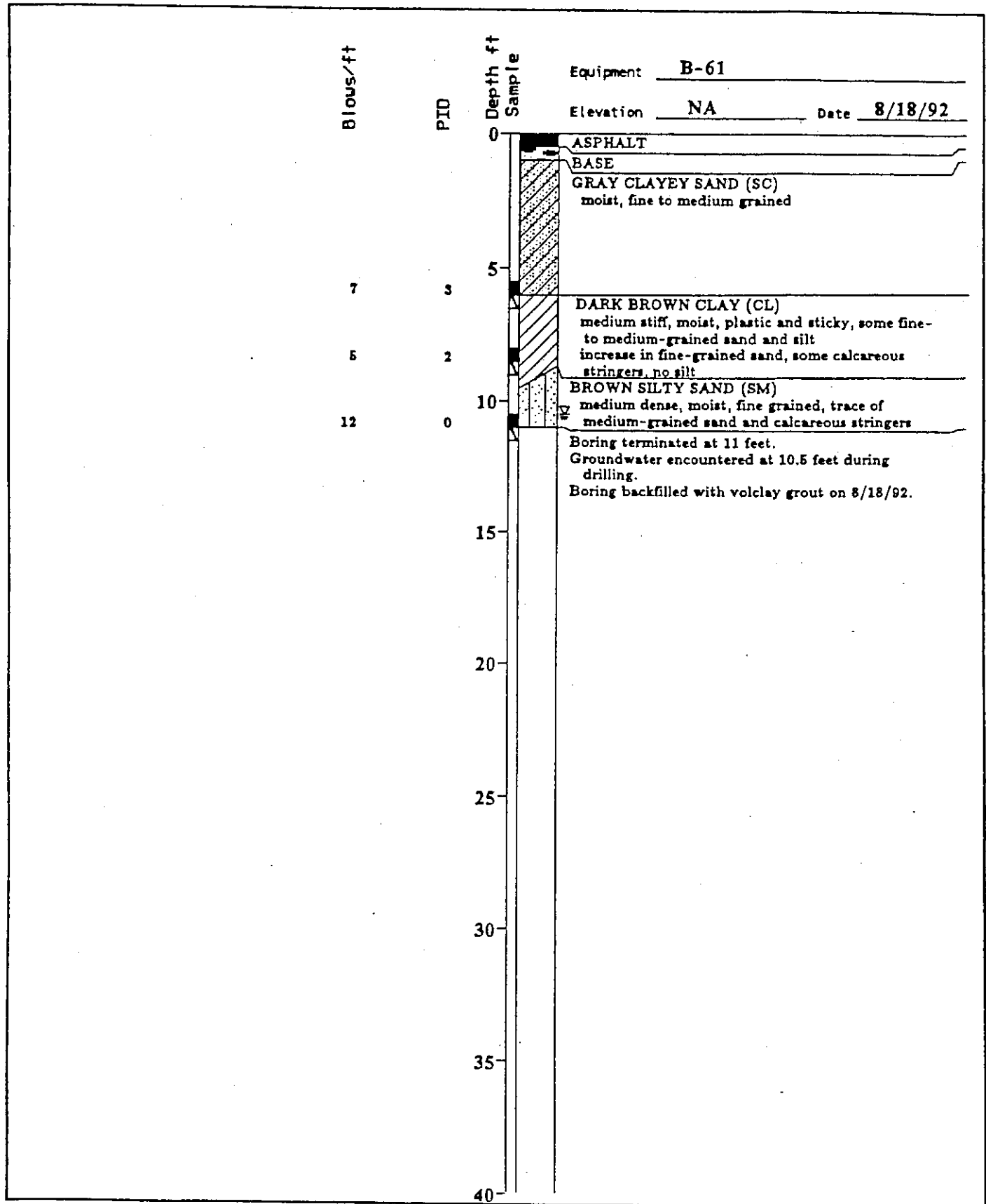


Harding Lawson Associates
 Engineering and Environmental Services

Log of Boring B-13
 Chevron Carlsbad
 Carlsbad, California

(sheet 1 of 1) **PLATE B8**

DRAWN	PROJECT NUMBER	APPROVED	DATE	REVISED	DATE
HK	10925-702	<i>RTM</i>	3/93		



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring B-14
Chevron Carlsbad
Carlsbad, California

(sheet 1 of 1)

PLATE

B9

DRAWN	PROJECT NUMBER	APPROVED	DATE	REVISED	DATE
HK	10925-702	RTM	3/93		

Blous/ft

PID

Depth ft
Sample

Equipment _____

Elevation _____

NA

Date _____

ASPHALT

ROAD BASE

GRAY CLAYEY SAND (SC)

moist, fine to medium grained

5

GRAY SAND (SP)

moist, fine grained, very little silt

BROWN CLAYEY SAND (SC)

moist, fine grained, approximately 10% clay

very little clay in lenses

10

Boring terminated at 9 feet.

Groundwater encountered at 8 feet during drilling.

Boring backfilled with volclay grout on 8/19/92.

15

20

25

30

35

40



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring B-15

Chevron Carlsbad
Carlsbad, California

(sheet 1 of 1)

PLATE

B10

DRAWN

PROJECT NUMBER

10925-702

APPROVED

RTM

DATE

3/93

REVISED

DATE

Top of Casing 99.28 ftEquipment CME-75, 8" & 10" HSAElevation 99.5 ft Date 6/18/91(See Plate B2 for
Wellhead Construction)
Bentonite Grout

Bentonite Chip Seal

4" dia. Blank
PVC Casing

10" dia. Borehole

Filter Sand
(No. 3 Monterey)4" inside dia.,
5.5" outside dia.,
Slotted PVC Prepak
Casing (0.020" Slots)4" dia. Blank
PVC Silt Trap
Bottom Cap

Blows/ft

PTD

True Vert.
Depth ftDepth ft
Sample

6" CONCRETE SLAB

GRAY SAND WITH SILT (SP-SM)
dense, moist, fine grainedGRAY-BROWN CLAYEY SAND (SC) [FILL]
very dense, moist, fine to medium grainedGRAY-BROWN SILTY SAND (SM)
dense, moist, fine to medium grained, with some
organic matterwith some clay, decreasing sand grain size
trace of organic matter, increasing silt content
with trace of shell fragment and fossilGRAY SANDY SILT (ML)
very stiff, moist, fine-grained sand, with some
medium-grained sand and clayGRAY SILTY SAND (SM)
medium dense, saturated, fine to medium grainedGRAY-BROWN SAND (SP)
medium dense, saturated, fine to medium grained,
with some siltDARK GRAY SANDY SILT (ML)
very stiff, saturated, fine-grained sand, with some
medium-grained sandDARK GRAY SILTY SAND (SM)
medium dense, saturated, fine to medium grainedDARK GRAY SILT (ML)
stiff, wet, with some fine-grained sand and clay,
with trace of organic matterBLACK TO DARK GRAY SILTY CLAY (CL)
stiff, wet, with some fine-grained sand
with some irregular-shaped concretions, slightly
increasing fine-grained sand contentGRAY CLAYEY SAND (SC)
medium dense, saturated, fine to medium grained,
with some silt, with trace of organic matterGRAY SANDY SILT (ML)
very stiff, wet, fine-grained sand, with clay and
some irregular-shaped concretions and organic
matterDARK GRAY SANDY CLAY (CL)
hard, wet, fine-grained sand, with silt, with some
irregular-shaped concretions

Boring terminated at 26 feet.

Ground water encountered at approximately 14 feet
during drilling.Boring converted to ground-water observation well
on 6/18/91.Boring was drilled at an angle of approximately 23
degrees from vertical.Harding Lawson Associates
Engineering and Environmental Services

Log of Boring MW- 6

(sheet 1 of 1)

PLATE

Chevron Carlsbad
Carlsbad, California

B11

DRAWN

PROJECT NUMBER

APPROVED

DATE

REVISED

DATE

HK

10925-702

RTM

3/93

Top of Casing 97.75 ft

(See Plate B2 for
Wellhead Construction)

Bentonite Grout

Bentonite Chip Seal

4" dia. Blank
PVC Casing

10" dia. Borehole

Filter Sand
(No. 3 Monterey)

4" dia. Slotted PVC
Casing (0.020" Slots)

4" dia. Blank
PVC Silt Trap
Bottom Cap

Blows/ft

PID

Depth ft
Sample

Equipment CME-75, 8" & 10" HSA

Elevation 98.00 ft Date 6/18/91

3" ASPHALTIC CONCRETE
GRAY-BROWN SILTY SAND (SM)
medium dense, moist, fine to medium grained, with
trace of clay

GRAY-BROWN CLAYEY SAND (SC)
medium dense, moist, fine to medium grained
BROWN-GRAY SILTY SAND (SM) [FILL]
medium dense, moist, fine to medium grained, with
some clay
with trace of subangular fine gravel
increasing silt content, decreasing sand grain size

DARK GRAY SANDY SILT (ML)
very stiff, very moist, fine- to medium-grained
sand

GRAY-BROWN SILTY SAND (SM)
medium dense, saturated, fine to medium grained
BLACK CLAY (CL)
stiff, wet

GRAY-BROWN SAND (SP)
medium dense, saturated, fine to medium grained,
with trace of silt
interbedded thin black clay lenses

DARK GRAY-BROWN TO BLACK CLAY (CL)
stiff, saturated, with some fine-grained sand and
irregular-shaped concretions

GRAY SAND (SP)
medium dense, saturated, fine to medium grained

GRAY SANDY CLAY (CL)
medium stiff, saturated, fine- to medium-grained
sand, with some irregular-shaped concretions

GRAY CLAYEY SILT (ML)
saturated, with some irregular-shaped concretions

Boring terminated at 23 feet.
Ground water encountered at approximately 12 feet
during drilling.
Boring converted to ground-water observation well
on 6/18/91.



Harding Lawson Associates
Engineering and Environmental Services

Log of Boring MW- 7

Chevron Carlsbad
Carlsbad, California

(sheet 1 of 1)

PLATE

B12

DRAWN

PROJECT NUMBER

APPROVED

DATE

REVISED

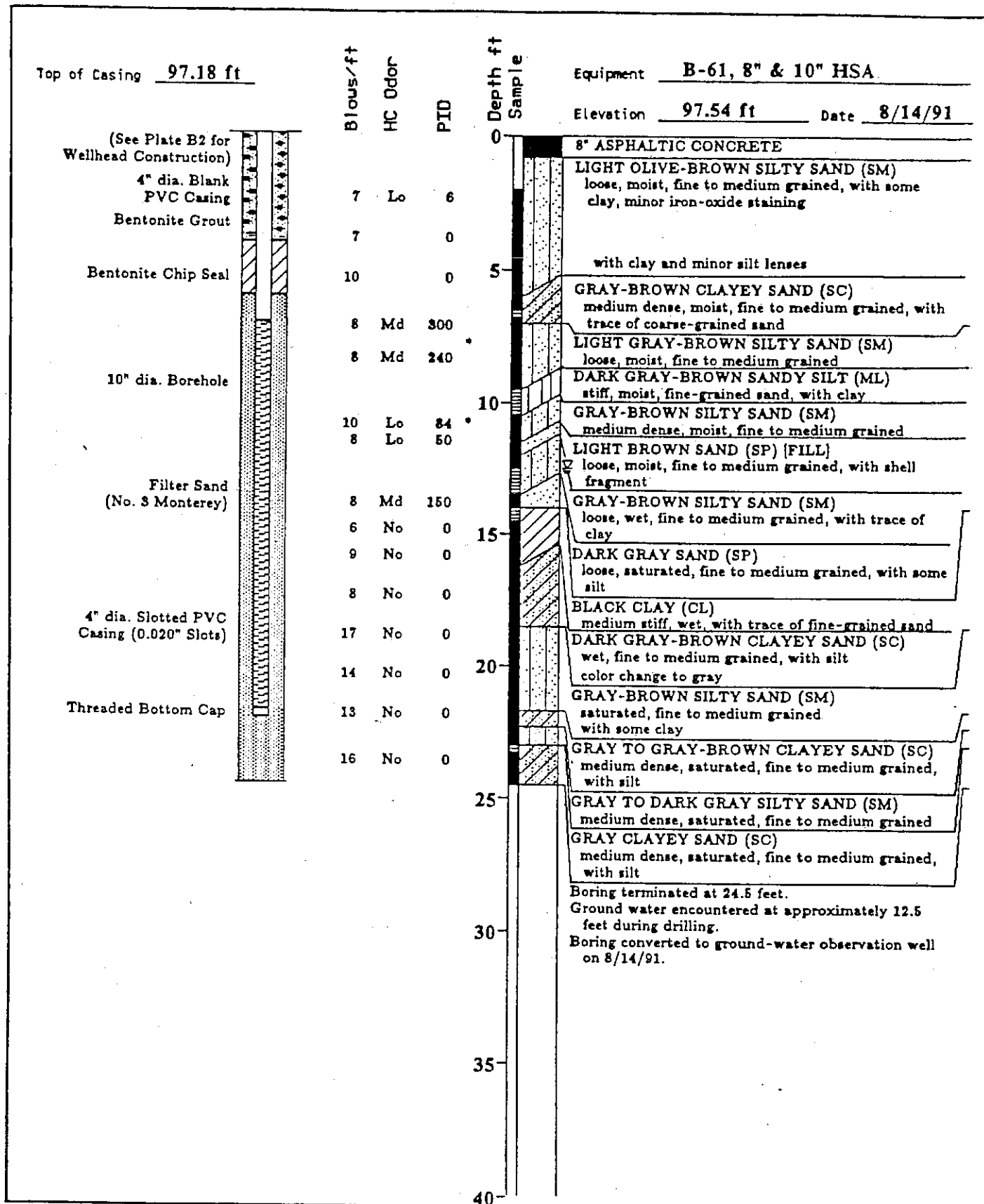
DATE

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Log of Boring MW- 8

Chevron Carlsbad
Carlsbad, California

(sheet 1 of 1)

PLATE

B13

DRAWN

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PROJECT NUMBER

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RTM

DATE

3/93

REVISED

DATE

Top of Casing 97.78 ft

Equipment B-61, 8" & 10" HSA

Elevation 98.16 ft Date 8/15/91

(See Plate B2 for
Wellhead Construction)

4" dia. Blank
PVC Casing

Bentonite Grout

Bentonite Chip Seal

10" dia. Borehole

Filter Sand
(No. 3 Monterey)

4" dia. Slotted PVC
Casing (0.020" Slots)

Threaded Bottom Cap

Blows/ft

PID

Depth ft
Sample

2 FEET OF ASPHALTIC CONCRETE

YELLOW-BROWN SILTY SAND (SM)

medium dense, moist, fine to medium grained,
slight iron-oxide staining
color change to brown, with some clay, increasing
fine-grained sand content, with some rootlets

color change to gray-brown

loose, fine-grained sand, increasing silt content,
with some silt lenses, minor black colored staining

DARK GRAY-BROWN SANDY SILT (ML) [FILL]
medium stiff, moist, fine-grained sand, with some
clay

DARK GRAY-BROWN CLAY (CL)
moist, with some silt, with trace of fine-grained
sand, with some organic matter

GRAY-BROWN SILTY SAND (SM)
loose, wet, fine to medium grained, with trace of
clay

BLACK CLAY (CL)
medium stiff, moist, trace of fine-grained sand and
organic matter

DARK GRAY SANDY CLAY (CL)
stiff, saturated, fine- to medium-grained sand

GRAY-BROWN SILTY SAND (SM)
medium dense, wet, fine to medium grained, with
minor clay lenses
color change to dark gray-brown, loose, with some
clay, with trace of organic matter

DARK GRAY SANDY CLAY (CL)
stiff, wet, fine- to medium-grained sand, with silt

Boring terminated at 24.5 feet.
Ground water encountered at approximately 11.5
feet during drilling.
Boring converted to ground-water observation well
on 8/15/91.



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Log of Boring MW- 9

Chevron Carlsbad
Carlsbad, California

(sheet 1 of 1)

PLATE

B14

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PROJECT NUMBER

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DATE

REVISED

DATE

HK

10925-702

RTM

3/93

Top of Casing 98.79 ft

(See Plate B2 for
Wellhead Construction)
Bentonite Pellet Seal

4" dia. Blank
PVC Casing

10" dia. Borehole

Filter Sand
(No. 3 Lonestar)

4" dia. Slotted PVC
Casing (0.020" Slots)

Bottom Cap

Blows/ft

PTD

Depth ft
Sample

Equipment B-61

Elevation 98.79 ft Date 8/18/92

CONCRETE
ASPHALT
ROAD BASE
GRAY SAND (SP)
medium dense, moist, fine grained, trace of silt and
iron-oxide staining
increase in fine- to medium-grained sand, some
coarse-grained sand, increase in silt
BROWN CLAY (CL)
medium stiff, moist, fine-grained sand
decrease in grain size
GRAY SAND (SP)
medium dense, moist, coarse grained, some
subrounded fine gravel, decrease in grain size
medium- to coarse-grained sand
BLACK CLAY (CL)
medium stiff, wet, plastic and sticky organic clay
GRAY SAND (SP)
medium dense, wet, fine to medium grained, some
coarse-grained sand
increase in grain size, medium-grained sand
GRAY SANDY SILT (ML)
stiff, wet, fine- to medium-grained sand, micaceous
silt, some clay
increase in silt and clay content toward bottom of
sample
Boring terminated at 25 feet.
Groundwater encountered at approximately 11 feet
during drilling.
Boring converted to monitoring well on 8/18/92.



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Log of Boring MW-10

Chevron Carlsbad
Carlsbad, California

(sheet 1 of 1)

PLATE

B15

DRAWN	PROJECT NUMBER	APPROVED	DATE	REVISED	DATE
HK	10925-702	<i>RTM</i>	3/93		

Top of Casing 96.72 ft

(See Plate B2 for
Wellhead Construction)
Bentonite-Cement Grout
Bentonite Pellet Seal

4" dia. Blank
PVC Casing

10" dia. Borehole

Filter Sand
(No. 3 Lonestar)

4" dia. Slotted PVC
Casing (0.020" Slots)

Bottom Cap

Blows/ft

PID

Depth ft
Sample

Equipment B-61

Elevation 96.72 ft

Date 8/17/92

ASPHALT

ROAD BASE

BROWN SAND (SP)

moist, fine to medium grained, some fine-grained
sand, some silt

BROWN SANDY SILT (ML)

stiff, moist, fine-grained sand, trace of
coarse-grained sand and subrounded fine gravel

DARK GRAY SAND (SP)

loose, wet, fine to medium grained, trace of
coarse-grained sand

BLACK CLAY (CL)

medium stiff, moist, very plastic and very sticky,
organic clay

color change to brown, increase in fine-grained
sand

GRAY SILTY SAND (SM)

wet, fine to medium grained, some clay

BROWN SANDY SILT (ML)

soft, wet, fine-grained sand, micaceous silt

Boring terminated at 25.5 feet.

Groundwater encountered at approximately 12 feet
during drilling.

Boring converted to monitoring well on 8/17/92.



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Log of Boring MW-11

Chevron Carlsbad
Carlsbad, California

(sheet 1 of 1)

PLATE

B16

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DATE

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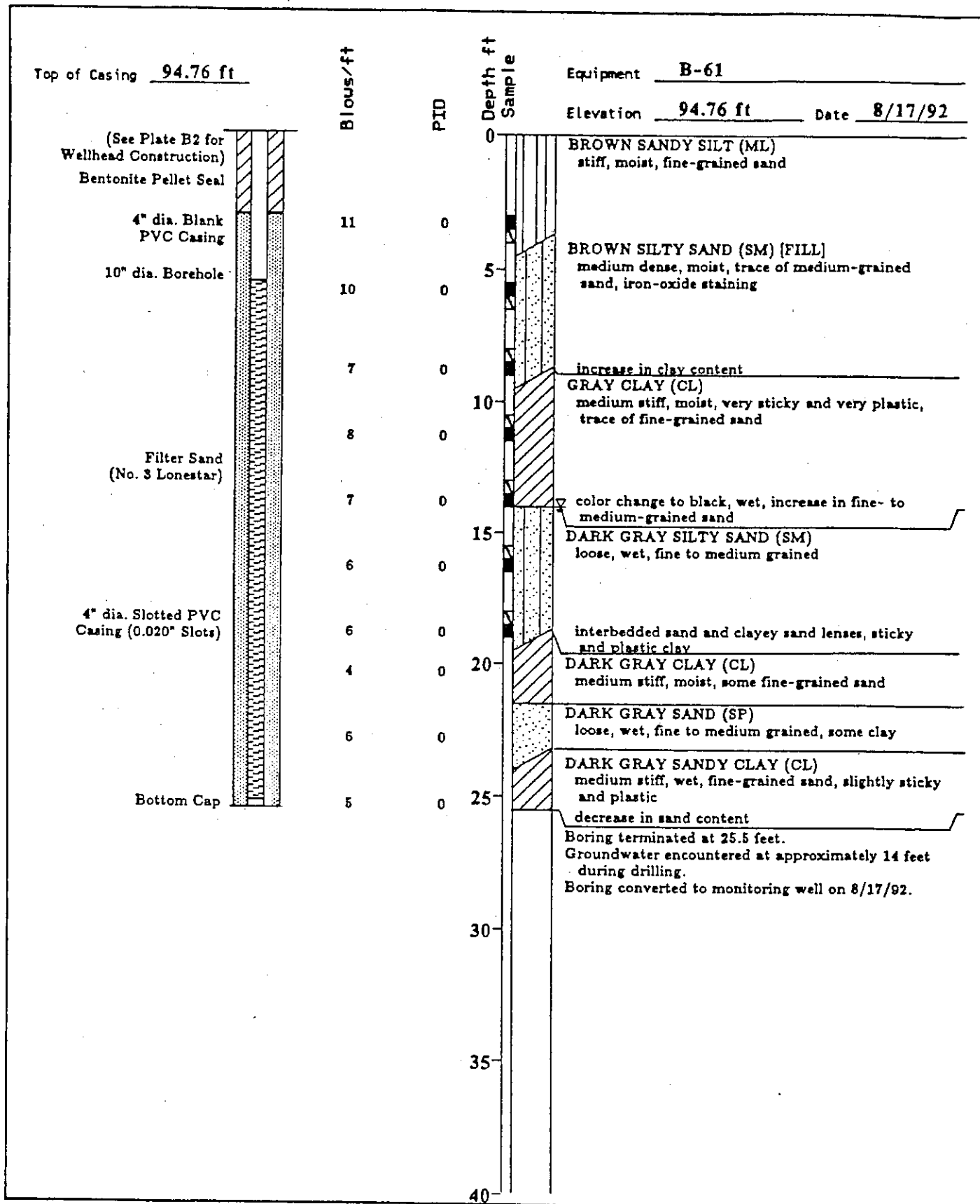
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10925-702

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3/93



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Log of Boring MW-12

Chevron Carlsbad
Carlsbad, California

(sheet 1 of 1)

PLATE

B17

DRAWN

PROJECT NUMBER

APPROVED

DATE

REVISED

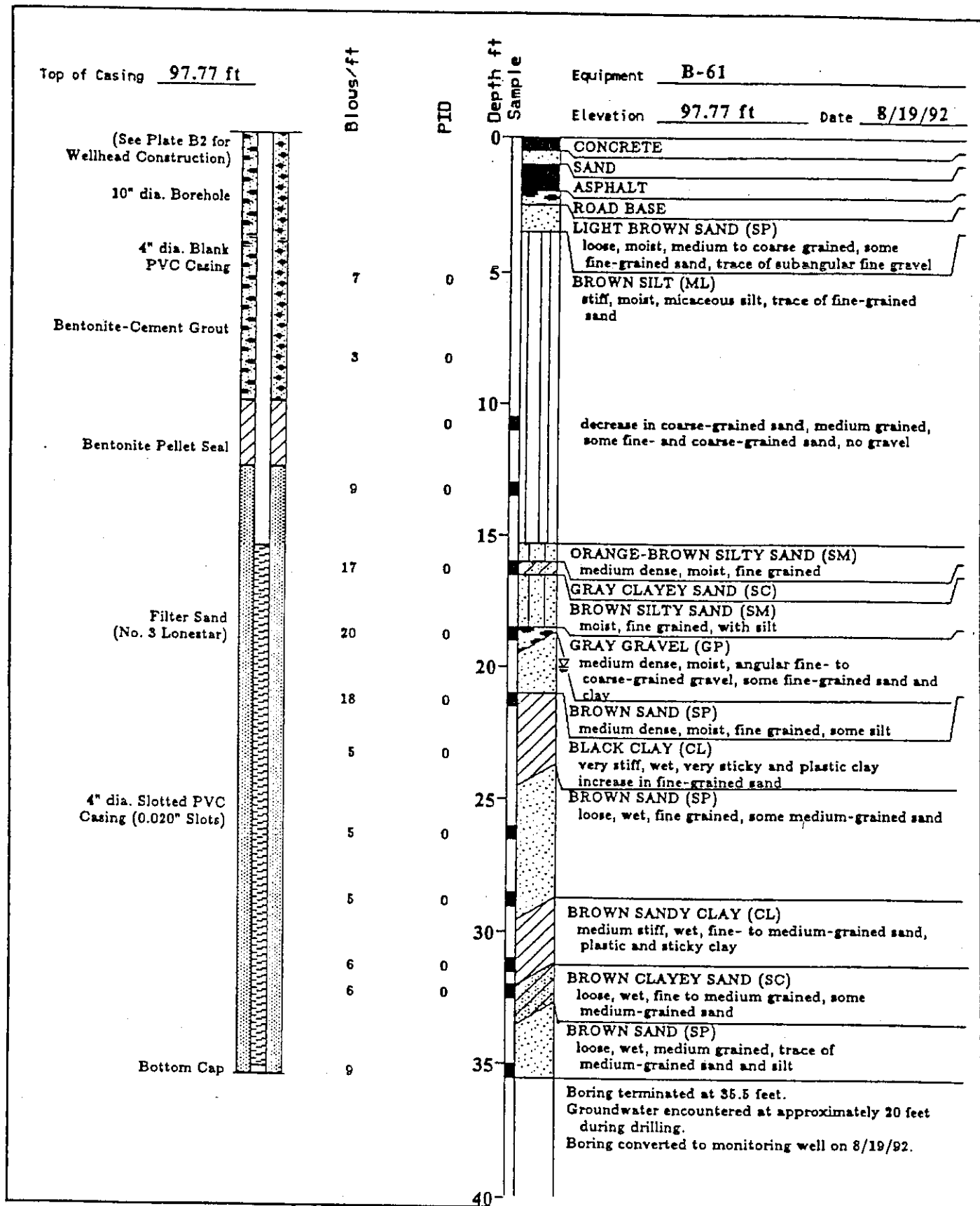
DATE

HK

10925-702

RJM

3/93



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Log of Boring MW-14

(sheet 1 of 1)

PLATE

Chevron Carlsbad
Carlsbad, California

B18

DRAWN
HK

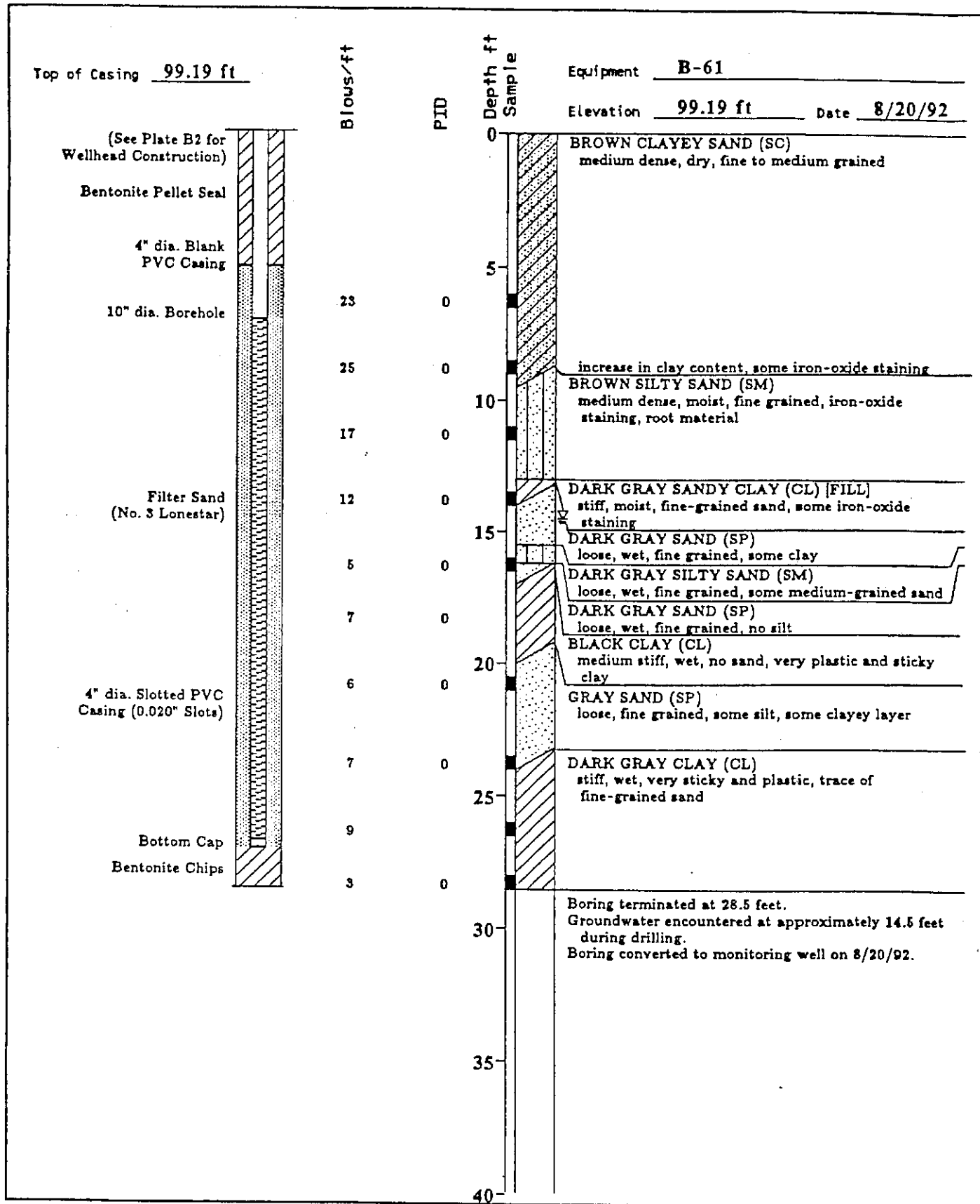
PROJECT NUMBER
10925-702

APPROVED
RTM

DATE
3/93

REVISED

DATE



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Engineering and Environmental Services

Log of Boring MW-15

(sheet 1 of 1)

PLATE

Chevron Carlsbad
Carlsbad, California

B1C

DRAWN

PROJECT NUMBER

APPROVED

DATE

REVISED

DATE

HK

10925-702

RTM

3/93

APPENDIX C

Public Notice and Emergency Information

PUBLIC NOTICE

PUBLIC NOTIFICATION FOR THE ENVIRONMENTAL RESTORATION PROJECT AT CHEVRON SERVICE STATION #9-1312 LOCATED AT 2500 EL CAMINO REAL CARLSBAD, CALIFORNIA

The property currently owned by ChevronTexaco Corporation is undergoing natural environmental remediation, which is being managed by SECOR. This is an inactive remedial technology that occurs in the subsurface with no additives to the subsurface. This process is considered a safe and effective way to restore the environment to a clean state.

All monitoring activities will be performed by a qualified environmental remediation company, and be supervised by experienced professionals. Remediation by natural attenuation to reach cleanup goals approved by the oversight agency is anticipated to take approximately 20 to 30 years.

CAP PUBLIC NOTIFICATION LETTER

September 16, 2004

Name
Address
City, State Zip

Dear *:

CLEANING OF ENVIRONMENTAL CONTAMINATION RESULTING FROM
LEAKING UNDERGROUND STORAGE TANKS LOCATED AT FORMER CHEVRON STATION
#9-1312, 2500 EL CAMINO REAL, CARLSBAD, CALIFORNIA.

The Chevron Environmental Management Company (Chevron) and their consultants, SECOR International Incorporated (SECOR) have proposed a corrective action plan (CAP) to remediate the soil and groundwater contamination at the site referenced above. The County of San Diego Department of Environmental Health (DEH) must review the CAP prior to implementation of the plan. This notice is sent to advise you that the plan is available for review, and to advise you that DEH is accepting public comment on the plan through (use 30-day window).

The environmental contamination at the site resulted from a leaking underground fuel tank system. The leak was first discovered in the Winter of 1987. Since that time, Chevron has instituted cleanup efforts to control the adverse impacts to the public, while simultaneously investigating the size of the release. Chevron now proposes a CAP to effectively clean up the contamination. Chevron's activities have been overseen by DEH. The CAP proposes to remediate soil contamination by natural attenuation.

You may review a copy of the CAP for 2500 El Camino Real, Carlsbad, California, SAM Case # H05724 at the Carlsbad City Library, 1250 Carlsbad Village Drive, or at the offices of the County DEH, 1255 Imperial Avenue, Suite 300, San Diego, CA.

Written comments on the CAP may be directed to Kent Huth by FAX at (619) 338-2377 or by mail to the County of San Diego Department of Environmental Health at P.O. Box 129261, San Diego, CA 92112-9261. Comments must be received by (use 30-day window).

Questions regarding the content of the CAP should be directed to one of the following:

- 1) Chevron Environmental Management Company
145 South State College Boulevard
P.O. Box 2292
Brea, CA 92822-2292
Contact Person: Mr. Eric Roehl
- 2) SECOR International Incorporated
2655 Camino Del Rio North, Suite 302
San Diego, CA 92108-1633
(619) 296-6195
Contact Person: Ms. Kim Thompson

- 3) County of San Diego
Department of Environmental Health
Land and Water Quality Division
Site Assessment and Mitigation Program (SAM)
P.O. Box 129261
San Diego, CA 92112-9261
(619) 338-2222
Contact Person: Mr. Kent Huth

Sincerely,

*

EMERGENCY INFORMATION (POST ON SITE)

ACUTE SYMPTOMS*

Dizziness and Nausea

Unconsciousness

FIRST AID

Rest, Shade, and Fresh Air

Get medical help

SAN DIEGO PARAMEDICS: 9-1-1

HOSPITAL NAME: Tri-City Medical Center – (760)724-8411
4002 Vista Way
Oceanside, CA 92056

Transportation will be by contractor vehicle or ambulance depending upon the emergency.

DIRECTIONS: Start out going NORTH on EL CAMINO REAL/CR-S11 N toward S. EL CAMINO REAL. Merge onto CA-78 E toward ESCONDIDO. Take the COLLEGE BLVD exit. Turn LEFT onto COLLEGE BLVD
Total Distance: 2.18 miles
Total Estimated Time: 3 minutes

LOCAL RESOURCES:

Ambulance	9-1-1	
Hospital Emergency Room	9-1-1	
Law Enforcement	9-1-1	
Fire Department	9-1-1	
Explosives Unit	9-1-1	
Poison Control Center	9-1-1	
Air Pollution Control District		(858) 560-4700
San Diego Dept. of Health Services (SAM)		(619) 338-2222
San Diego Regional Water Quality Control Board		(619) 515-3500
CA Office of Emergency Services		(626) 683-6700

COMPANY RESOURCES:

Project Manager:	Kim Thompson (SECOR)	(619) 296-6195
Site Supervisor:	Neal Keller (SECOR)	(619) 296-6195
Toll Free Number:		(800) 727-9735
Owner:	ChevronTexaco Corporation	
Site Representative:	Eric Roehl	

In the event of accident, injury or illness, an incident report must be completed and submitted within 24 hours.